THE VETERINARY JOURNAL

AND

Annals of Comparative Pathology.

MAY, 1891.

DISTEMPER IN THE DOG, AND EXPERIMENTS THEREON IN ST. THOMAS'S HOSPITAL.*

BY EVERETT MILLAIS, ESQ.

BEFORE I say a word on the question which is before us this evening, I am in duty bound to apologise for introducing to your notice a disease which finds no place in the wards of our hospital. I think, however, on this point that it will be a sufficient excuse when I say that Distemper, being a distinctly infectious disease, with *sequelæ* not far different to those which follow our own particular infectious maladies, it is one which can be studied with advantage, especially in relation to the results which have been arrived at after its investigation in this hospital.

I have, however, no excuse to offer, for speaking of a disease which ought to have a name of its own, as Distemper, except it be that no other nation has a better.

It is widely known in Europe, Asia, America and Australasia—in fact, wherever the dog exists; and it is communicable to all the dog-tribe, cat-tribe, and ferrets.

The English-speaking nations call it "Distemper," the French "Maladie des chiens," the Germans "Hundekrankheit," whilst other nationalities all have similar cognomens; showing that, although it is recognised as a well-known disease, it has no specific name. You will therefore allow that I am obliged to defer to circumstances, and have to call a disease by the very absurd name Distemper.

Now, gentlemen, as all Distempers have diagnostic symptoms by which they are indicated, it might be well to say a few words on those of this particular Distemper.

* Read before the Medical and Physical Society, St. Thomas's Hospital, March 5th.

After a brief term of incubation—generally seven days—there is loss of appetite, and more or less lassitude; the nose becomes hot and dry; the temperature rises rapidly; and the bowels become exceedingly constipated, or the reverse.

About the third day after the appearance of these symptoms, the animal begins to show a discharge from the eyes and the nose; first it is a clear fluid, and then it becomes purulent. A cough develops, which has a peculiarly husky sound, and at times causes vomiting. Rapid emaciation takes place, especially about the head; whilst the expression is indicative of great anxiety. Finally, in quite a number of cases a pustular eruption breaks out on the belly and thighs. In about a fortnight the symptoms commence to abate, and the animal recovers, that is to say, if none of the *sequelæ* follow.

These *sequelæ* are Bronchitis, Pneumonia, Pleurisy, Gastritis, Enteritis, Peritonitis, Icterus; whilst, owing to cerebral mischief, we get Fits, Chorea, Paralysis—partial and complete—and eye and ear troubles, which not unfrequently end in loss of sight and hearing. One attack generally confers immunity; and as, under existing circumstances, nearly every dog contracts Distemper as a puppy, it is obvious that if *sequelæ* set in the animal has a poor chance of recovery. This is especially true in the case of valuable animals, and Distemper is awaited with no small anxiety on the part of the owners, because of the pecuniary value attached to these animals.

Now, in putting before you the symptoms of the uncomplicated disease, it must be evident that we have no symptoms which can account for death, but in the *sequelæ* we have; consequently, it is hardly necessary for me to say that dogs never die from simple Distemper; what carries them off is, as a rule, Pneumonia or Enteritis, and what makes dogs absolutely useless is Chorea and Paralysis. Under these circumstances, it would perhaps be advisable to say a few words on the Distemper-rate first, and of the death-rate afterwards, since it is generally admitted that Distemper carries off more victims than all the other canine diseases put together.

Regarding the Distemper-rate, I find that at different Shows it was as follows:—

The Crystal Palace	1887, it was	50	per cent.
Barn Elms ..	1888, „	50	„
Brighton I. ..	1889, „	70	„
Crystal Palace ..	1889, „	70	„
Liverpool ..	1890, „	50	„
Ayr	1890, „	48	„
Brighton ..	1890, „	69	„

These statistics are taken from the exhibition of 10 dogs at these Shows, with the destruction of 76 at home. If, then, this result occurs in the case of 10 dogs, and the average at each was 150 puppies, the entire result must have been very large.

And that this is due to gross sanitary neglect is at once seen,

when these Shows are contrasted with those at the Agricultural Hall and Manchester, where precautions were taken on the strength of a new rule I brought into the Kennel Club. At these Shows the rate was at once reduced to ten per cent., and would have been lower, had the precautions been lengthened into the refusal to admit dogs with the disease, dogs not entirely convalescent, and dogs from kennels in which the disease was rife, and which had not been disinfected in any way.

These statistics will show you the risk to which young dogs are exposed, and I may here rectify an omission which I perceive I have made, namely, that Distemper is a disease peculiarly associated with puppyhood; but old dogs, which have not had the disease and become immune to it, are also liable, and generally die.

As regards the death-rate, Mr. Chaplin tells me that in one year, when Master of the Burton Hounds, he lost 100 couples. Out of a number of cases I find it to be about sixty per cent. In another I find it to be sixty-nine per cent.

Finally, as an illustration of both the Distemper-rate and the death-rate, we have the late Brighton Show.

At this Show, out of 125 non-immune puppies, eighty-six were attacked; of these no less than sixty-five died, and the disease being carried back to the kennels whence they came, twenty-eight more succumbed, thus laying to the door of Brighton Show ninety-three dead puppies, the value of which, commercially, exceeded £2,000.

Nearly every one of these puppies died of Pneumonia, and such statistics as these will, I think, give you an idea of what Distemper means when it breaks out amongst pure-bred dogs.

I have here especially said pure-bred dogs, because it is a singular, or an apparently singular, fact that the great death-rate should occur amongst dogs of this class, and not those of baser parentage. Mr. Fleming, late Principal Veterinary Surgeon to the Army, says, "It is much more frequent and fatal among highly-bred animals than those whose constitution is less modified by breeding and rearing."

At first sight such a statement might appear unfounded, were it not for the fact that we know it is true; for, as I have said, the death-rate occurs amongst the highly-bred animals and not those of baser parentage, "whose constitution," Mr. Fleming says, "is less modified by breeding."

This question of breeding, gentlemen, I shall ask you to allow me to consider for a few moments; for apart from its interest as a separate study, and one which I have pursued with the deepest interest for the past twenty years, it is through breeding and

modifying the pathogenic germ of the disease that, as in other diseases of a similar class, we have been enabled to induce the same disease without the dangerous *sequelæ* from which the death-rate occurs.

I will therefore ask you to bear with me while I briefly allude to the system under which we breed our dogs, so far as it relates to constitutional modification.

Now the first question I have here to put before you, is as to the value of a pedigree animal. Many, from seeing these animals at shows, might consider that the better the pedigree, and the more famous names it contained, the more valuable an animal becomes.

As a matter of fact, this pedigree only shows the animal to be well bred, and that is all. But the real value of a pedigree animal of any kind, is the power it has of passing on its own form to its offspring. In other words, it is gifted with an apparently greater hereditary power than an animal not of pedigree blood. For instance, if we mate a Shorthorn bull with a cow of bastard breeding, the produce will much more resemble the sire than the dam, and *vice versâ*.

Why is this? Every little farmer in the kingdom knows it to be true; but if you asked him why, his answer would be that the bull was better bred. This, however, does not answer the question. What we require to know is not only how the bull was bred, but why it has this greater power than the cow.

It is to this point that I wish to draw your attention, and to understand it we must see how a bastard animal is bred, and how a pedigree animal is produced.

Now, there are two ways of breeding an animal: (1) By a system of equal factors; (2) by a system of unequal.

I will take the equal system first.

Now, if you will kindly direct your attention to diagram No. 1, you will there see an unfilled pedigree form. The space on the left-hand side of the large bracket is to be occupied by the name of the animal; the spaces in front of the two smaller brackets will contain the names of its sire and dam; the spaces in front of the four smaller brackets, the names of its grandparents, etc., etc. Each of these spaces have a definite value.

In diagram 2 you will perceive that as the animal is a single creature, its value is 1; its parents then each represent halves, the grandparents fourths, the great-grandparents eighths, etc., etc. If now you represent the great-grandparents by names, or—as I shall do in this case—letters of the alphabet, you will at once find the composition of the animal whose pedigree you have before you. Diagram 3 will show it to be ABCDEFGH, or a unit of eighths, each of which is of equal value in the whole.

Thus, if his great-grandparents were members of the same variety but of different breeds, then he would be a mongrel; but if they were members of the same breed, but not of the same strain, he would be badly bred. For instance, you might have a cow whose eighths were of different kinds—such as Polled Angus, Hereford, Shorthorn, etc., etc.; this would be a mongrel. On the other hand, you might have a Shorthorn composed of Shorthorns of eight different family types; such an animal would be badly bred.

It is, therefore, obvious that an animal composed such as the latter, although it has hereditary power in the same quantity as any other animal, cannot exercise the distinctive type of one of its ancestors more than another. What it does is to throw half of itself to its progeny, and that we know to be one-sixteenth of each. For this reason, an animal bred on these lines—which is that of the equal factor system—has no pedigree-worth or commercial value, however many names of distinction it contains.

When, however, we commence to breed animals of the same family together, we no longer breed upon the equal factor system, but we commence upon one of unequal; and by this it is almost unnecessary to add, that instead of having a unit composed of equal factors, we get one in which one factor has the preponderance over the other—in other words, we get one in which there is a greater factor of a certain blood.

As an instance of this, I will ask you to look at diagram 6. There you will see that commencing with F and S, FS is produced. FS mated with its own sire produces F3S. which in turn is mated with T.

The produce of this T4F3S is again mated with F, when we get FIIT4S, or an animal of 16-16ths, II of which are the same blood. Now this is what is termed inbreeding, and its object is this: to produce animals which, in themselves, have the blood of some animal so concentrated that they can in their offspring produce the type of the animal from which they themselves were descended. Diagram 6 is simply the abbreviated pedigree of champion Fino V., one of the most noted of our Basset hounds, as shown in diagram 5. The object here was to produce an animal like Fino de Paris. This hound had no power of reproducing a greater likeness than himself, but when inbred to, so as to give birth to an animal in which there was more than a half and with some fresh blood, the blood of Fino de Paris becomes so concentrated in Fino V. that this hound has a greater hereditary power of throwing the Fino de Paris type than Fino de Paris had himself.

This, gentlemen, is a pedigree animal, and the more you inbred the greater concentration of one blood do you get; and I need

scarcely add that in a very short time you make a breed founded on the particular type of one animal.

For instance, let me draw your attention to diagram 6. Here we have the pedigree of Xena, the best Basset ever bred in the country. On the equal factor system, this hound should have 128 ancestors, but by inbreeding she has only eight.

I have now, I hope, explained to you why a pedigree animal is of higher value than a badly bred one; and I trust I have explained why we have to breed on an unequal factor system to produce such. I have now to explain the disadvantages; and my sole reason in troubling you so lengthily with this breeding question was to arrive at this.

Under the equal factor system we have a constant incoming of fresh blood, under the unequal system it is far and few between; the result being that we approach self-fertilisation.

Now, it is hardly necessary for me to tell you that, whether it is applied to men or the lower animals, it produces constitutional deterioration.

By careful selection and just the necessary fraction of fresh blood, we can in our animals ward off physical degeneracy, but the constitutional remains; and to bring this portion of my words to a close, the Distemper-rate—whilst it is the same in every kind of dog, if they are brought into an infective area—the death-rate occurs in the pedigree or inbred dogs, and not in the badly bred and mongrels. In other words, when Distemper seizes the mongrel and badly bred dog, he recovers without *sequelæ;* on the other hand, our valuable show dogs, as you will see from the statistics I have given, are almost certain to have a very bad time, and to die.

Under these circumstances, mongrels and badly bred dogs being of no value, and the genesis of the disease being the same in them as in highly bred ones, it struck me that something might be done to protect dogs from Distemper, or at least put the highly bred dogs on a par with their baser-born brethren, so far as this disease is concerned.

How this was to be done I confess that I did not at first know. I had been a breeder of dogs for a large number of years, and I had lost probably as many puppies as most people have, my total being considerably over a hundred; in fact, I knew that it was almost impossible to show a puppy for the first time without bringing home the disease and infecting the whole kennel. On two occasions I have had every puppy carried off.

My first experiments were made on the duration of vitality in the contagion upon wood, and the effects of the different disinfecting agents upon it. This I will not trouble you with, but for-

tuitous circumstances threw me in contact with a number of gentlemen, many of whom are household names in the field of bacteriology and kindred sciences, and to enable myself to follow their reasonings regarding the question we were met together to advance, namely, the advisability of muzzling the English dogs, during the two late Rabies outbreaks, I read up the work of Mons. Pasteur and those of others, regarding the value of bacteriology and preventive medicine. It was impossible after reading the work of such men as I refer to, not to come to the conclusion that Distemper was a bacterial fever, and that good results might be obtained by investigating its origin on the same lines as has been followed in the case of other diseases of a like nature.

It does not require a great effort of mind to follow, for instance, "Crookshank's Manual of Bacteriology;" at the same time one must have a certain amount of practice in the necessary implements that are used, such as gelatine tubes, cultivating plates, etc., etc., and for this instruction I am indebted to Dr. Sherrington of this hospital, without whom nothing could have been done.

One must also have a knowledge of the dyes and stains for showing up bacteria, and to Dr. Copeman I am indebted for this; while to Mr. Dalzell I am indebted for his kind assistance in mounting the microscopic slides which I show this evening.

It was, then, to Dr. Sherrington whom I first applied, and he advised me in the first place to try and grow the disease outside the animal body, and find the pathogenic germ.

I will not trouble you this evening with all the ins-and-outs of the various experiments, but they amounted to this: I had in view three objects.

(1) To find the pathogenic germ. (2) To find a protective material. (3) Failing the above, to find a means of attenuating the pathogenic germ and give the disease in a milder form, or, as Dr. Sherrington has rightly described it, raise the vitality of the dog, in comparison with the vitality of the pathogenic organism, to such a pitch that the depression occasioned by the disease is no longer so low as to be dangerous to life.

It may be here observed that to raise the vitality of the dog, we would have to lower that of the organism, since the actual raising of that of the dog would be an impossibility.

In brief, then, having found that I could grow the disease in gelatines I announced the fact to Dr. Sherrington, and he then counselled me to send a dog to an infected district and try the experiment over again.

I did so, by sending a dog into the Distemper kennels at Lark-Hall Rise. In a week this puppy was suffering from Distemper, aggravated with commencing Pneumonia. On its arrival here,

the nasal secretion was examined, and after tubes had been inoculated from it, the animal was destroyed and its organs placed in alcohol for examination.

The nasal secretion, on being examined, was found to consist of epithelial cells, micrococci, and two kinds of bacilli, one of which I will call A, the other B.—A being smaller than B.*

Specimens of these will be found under the microscopes on the table; in the meantime, I hand round photographs of them.

The organs of the puppy sent from Lark-Hall Rise were now examined. After being hardened in alcohol and stained after Gram's method, similar organisms to those found in the nasal secretion were discovered in the trachea, lungs, liver and kidneys.

From the condition of the organs and the nasal secretion, I was led to test the cultures obtained from this puppy.

Two puppies were now obtained, one being inoculated by syringing the nostrils; the other being left untouched, but placed with the inoculated one.

In eight days, Watts, the porter, informed me that the puppies had got a bad cold, were coughing, and were suffering from Diarrhœa. On visiting them, I found well-marked Distemper, with bronchial mischief, the uninoculated one having evidently become naturally infected through contact with the virus.

The inoculated puppy was now destroyed, and its organs on examination were found to be in a similar condition to those already described; thus proving that the cultivations contained the pathogenic germ of the disease.

I now proceeded to isolate each organism, with the view of discovering which was the pathogenic one.

I found no difficulty in obtaining at once, by means of cultivating plates, pure cultures of the micrococcus and bacillus A; but it was not for at least two months that I obtained a pure culture of bacillus B.

During this time I experimented with both the micrococci and bacillus A, but on no occasion could I induce the disease, either with the micro-organisms separately or together.

Under those circumstances I came to the conclusion, that whatever part they might play in the disease, they were not the actual cause of origin.

I may here mention that I have been unable to find what bacillus A does in connection with the disease; so that I shall not mention it again; but as the micrococcus evidently plays an important part, I may state that it grows rapidly in gelatine, causing a clear liquefaction with a chalky deposit at the base of

* These bacilli have been shown in the illustrations accompanying Mr. Millais' previous paper in the VETERINARY JOURNAL.

the tube. Specimens of all these isolated micro-organisms are on the table.

Bacillus B descends in an almost clear liquefaction in the gelatine, as a flaky mass with a whitish scum on the surface of the liquid.

Specimens of the organism, and its appearance in the lung, are on the table.

The first slide is from a fuchsin specimen, the second stained after Gram's method.

A puppy was now obtained and inoculated with the bacillus, and in a week it showed the disease, there being no evidences of complication present. At this moment a puppy was inoculated with micrococci and kennelled with it, when in three days the first-named puppy showed signs of Pneumonia and was destroyed, and in three days more the micrococci-inoculated puppy showed the disease without complications and was destroyed.

On examination, the first-mentioned puppy was found to be filled with micrococci, the second with bacilli, or the reverse of what might have been expected.

This led me to suppose that the bacillus caused the disease, and that the micrococcus, as it grows very rapidly, brings on Pneumonia, finding a suitable field when the bacillus has caused lesions in the lungs.

Not, however, feeling satisfied that my surmise was correct, I inoculated two puppies with the bacillus, and directly they showed symptoms of the disease I destroyed one and inoculated the other with micrococci obtained from a very virulent case of Pneumonic Distemper in a kennel (Mr. Craven's) in Derbyshire, where no less than fifteen young hounds were carried off after infection had been introduced by the exhibition of one at Brighton in 1889.

On examination, I found that the organs of the puppy which was destroyed before Pneumonia set in, or was allowed to set in, containing nothing but bacilli; whilst that which had been inoculated with micrococci after the Distemper symptoms had set in contained few bacilli, but its lungs were typically Pneumonic. Thus proving that the bacillus was the cause of Distemper, micrococci the genesis of Pneumonia.

I should like here to make a few remarks on the value of the experiments, as far as they had gone.

In the first place, up to the period of which I am speaking, namely, 1889, it had been generally supposed that Distemper was a disease due to a variety of causes, viz., cold, exposure, and damp; and some authorities have gone so far as to include overfeeding and underfeeding, too little exercise, etc., etc., and a

number of like causes, amongst which I may name excitement at shows.

In a word, the cause of Distemper, although it was allowed to be generally the outcome of contagion, was also assigned to spontaneous generation.

Now I need hardly point out that these experiments amply demonstrated that Distemper was not only due to contagion, but the contagion being a living body, the spontaneous views held concerning it were shown to be founded on a want of knowledge of the true origin of the disease.

In the second place, these experiments show the infective powers of a diseased dog.

If any one will take the trouble to count the bacilli in the specimen shown under the microscope, from the nasal secretion of a diseased dog, which I may say represents about a quarter of a drop—he will find that a whole drop will contain about 64,000 bacilli. If, then, a dog, in an acute stage of the disease, discharges one drop per hour—which I may at once state is an exceedingly moderate computation of the amount thrown out by the nasal orifices—he will find no difficulty in coming to the conclusion that such an animal will expel in three days the enormous quantity of nearly fifty-eight millions.

These a dog would be casting into the air, and bespattering with them everything in its immediate vicinity, in its efforts to clear its bronchial tubes and trachea.

In the third place, the experiments proved the origin of the enormous Distemper percentages at shows.

Up to the present the precautions taken by committees of shows and exhibitions have been simply nominal. Committees are supposed not to allow any animal into a show which may infect other exhibits, and exhibitors are supposed not to send such animals. Committees are also supposed to accept only disinfected benches, and contractors only to provide the same. That all these precautions are scandalously neglected at times is obvious, otherwise we should not have these disgraceful outbreaks after shows.

These experiments prove, also, that the presence of an infected dog will cause an epizoötic amongst all non-immune puppies that come in contact with him. They prove, likewise, that any animal which is not absolutely convalescent will produce the same effect, and they prove, furthermore, that any animal—even a healthy one coming from a diseased area—can carry—if he is not disinfected—the germs of the disease on his coat, owing to the masses thrown out by a diseased animal in his immediate vicinity. In a word, Distemper is brought into shows by diseased and non-convalescent dogs, and by healthy animals coming from infected kennels.

Furthermore, such animals by their presence on the benches infect these also; and as the benches travel from show to show, even if there be not a single animal in the show capable of infecting the non-immune puppies, an epizoötic will arise from this cause as well. This latter question as to the benches I trust I have had settled, and you have only to notice the difference between the percentages of all non-efficiently disinfected shows, with their fifty and upward percentages, and those disinfected, with their ten per cent., to acknowledge the benefit these early experiments have yielded from a sanitary point of view, and which I trust before long to see still further added to.

Finally, it is made clear why the *sequelæ* after shows generally run into Pneumonia.

You are aware that in fever-wards, if a pneumonic case develops itself, and that case is not at once isolated, the greater portion of the cases become pneumonic. So it is in Distemper. The animals are sent to shows, not only suffering from Distemper but Pneumonia; they come to shows not only not convalescent from Distemper but from Pneumonia; and as I have shown that the coccus produces Pneumonia, so this coccus will be brought into shows by healthy dogs, together with the bacillus. As a result we have not only an epizoötic of Distemper, but one complicated with Pneumonia, and in the case of Brighton Show last year every dog that died did so of Pneumonia.

The pathogenic germ having now been demonstrated, I set to work on my original object—namely, to obtain either a protective material from the germ or a mitigating virus. And here I think it is advisable to state that in every case except one, in which the very virulent micrococci were used, and which I have mentioned, all the cases of induced Distemper with the various growths, whether pure cultures or not, were cases of mild Distemper complicated with mild bronchial affection.

I may also state that it was abundantly proved in these experiments that the disease enters by the nostrils, works its way down the air-passages, setting up Bronchitis, and then Pneumonia; further, that it is carried by the blood to other important organs of the body and sets up mischief there; lastly, that the period of incubation is about seven days.

Regarding the experiments with a protective fluid obtained from the bacillus itself, I will say but little, since, although satisfactory, the amount done in this line has been but small. Suffice it to say that eight of sixteen dogs have been rendered immune. This is most encouraging, and gives hopes that a certain prophylaxis will be obtained. But as the experiments have been so few in number, I will pass on to those in the use of an attenuated virus.

Now, to go back for a moment, I have said that the genesis of the disease is the same in the mongrel as in the highly-bred dog, and that the mortality is nearly always to be found in the latter, due, as I have shown, to the incestuous course of reproduction which is necessary to produce type.

That a seemingly mild zymotic disease—such as uncomplicated Distemper—should cause such disaster, is somewhat strange; but if we look further afield we find that zymotic disease brings about the same results in virgin lands where it has not previously been imported, and where the people by force of circumstances intermarry almost in the same degree as we breed our dogs. As an instance in point, Chicken-pox, which we, as a non-intermarrying race consider but a mild zymotic disease, carries off—when it breaks out, as it has done in some of the Pacific Islands—thousands, although its genesis there is the same as here.

If, then, we, in certain circumstances, can so deteriorate our constitutional power, that we cannot naturally withstand the inroads of disease of this class, it is evident that such disease—being due to another form of life—it must be possible to reduce its vitality in the same ratio that we reduce ours.

That this can be done is well known in other diseases; and without going too deeply into the question I may say that it has been done by differences in feeding, by differences in temperature, or, in a word, accustoming pathogenic life to altered circumstances.

I have said I was struck with the fact that, in the first experiments made, the disease communicated was of a mild character, and I will give you my reasons.

As a rule, the death-rate occurs in show dogs. Now, these animals, you must be aware, are the best of their kinds. They are of the highest type, and the greatest physical strength. Otherwise there would be no use in sending them for competition, which is generally of a severe character. In addition to this, when struck down by disease, they are given the most nourishing foods, nursed and attended to by the most skilled veterinary surgeons; and yet, with all these advantages in their favour, they frequently die.

These animals of mine were of the same class as far as breeding goes, but they had no physic, no nursing or attendance, and, in addition, were the poor miserable wrecklings of their litters—the very dogs that one would suppose would be the first to succumb, yet they in every case but one would have lived, and in other cases did live, notwithstanding all these disadvantages. Now, there must have been a reason for this, and as it could not have been any peculiar power of withstanding disease on the part of the dogs, it must have been some peculiar change which had come over the unseparated virus.

I have said that change of surroundings modifies both animal and microbic life; consequently, I had very little doubt in my mind that the microbes which cause Distemper and its complications had become modified by their change of surroundings.

I will allude to this change. The temperature of the dog is 101·5°, and at this temperature we may suppose the pathogenic and other germs find a suitable opportunity for reproduction. The change to which the germs were subjected was, that they were not only bred at a very much lower temperature—viz., that of an ordinary room—but they were artificially grown outside the body in a gelatine medium, and, in addition, passed through tube after tube. Under those circumstances you may well understand that their power of toxic production had been greatly modified.

Whether I am right in this view can only be judged by experiment, and I have now to put before you the number of animals which have been subjected to such treatment. In every case they were highly bred dogs—Bassets, bloodhounds, foxhounds, collies, dandie dinmonts and foxterriers, dachshunds, and St. Bernards.

I may here observe that I do not count those which became inoculated through neglect of sanitary precautions on my part. I efer to animals I have handled after using the virus. These amount to about half-a-dozen, and all became perfectly well and have since been immune, excepting two of Dr. Sherrington's experimental animals which died, they having contracted the disease whilst under experiment on other matters, and not in a fit condition to withstand disease.

The total number of experiments up to the present with this virus, and which have been made by Dr. Hamilton, Mr. Huband, F.R.C.V.S., Mr. Donaldson, M.R.C.V.S., and myself, is eighty.

In addition to this, we have twenty which contracted the disease through contact with some of these animals.

Out of this 100 there have been but ten deaths, and eight of these can be fully accounted for.

You must be aware that, whilst in a state of fever, an animal must be kept from changes of temperature and damp. In the case of the eight I mentioned, they were allowed to run about in the cold and the damp, had just been taken from their dams, and with regard to six of them, they were kennelled in an open field and given an open tub to rest in.

Under those circumstances, in addition to the fact that they were poor weakly pups, I have no hesitation in saying that they were killed, not by Distemper, but by the way they were treated when they had Distemper.

For this reason, and seeing that I wish to contrast this mitigated disease and reasonable precautions with animals which have had

every treatment and skill bestowed upon them during a natural attack, I will strike these eight out as in no wise experiments, and deal with seventy-two.

We have then seventy-two cases of Distemper communicated by this virus, with two deaths. Contrast this with the recent Brighton Show. At this show we have eighty-six cases of Distemper with sixty-five deaths; I am not counting those that died at home, where the infection was carried. In each of these cases the animals had every care and attention paid to them, yet we find sixty-five deaths.

This number out of eighty-six gives a death-rate of 75·6, which I think you will consider pretty high, even for a zymotic disease, and one which—were human beings or such animals on which we live concerned—would be immediately put a stop to. But that this mortality, or a mortality closely approaching it, is of almost monthly occurrence at our shows, and amongst our high and inbred animals, is undoubted. For we have not only the statement of eminent veterinary surgeons that high and inbred animals are the principal sufferers, but we have the fact of these enormous Distemper rates to guide us in this belief. Now, if such a death-rate as I have just given, and the undoubted evidence that it is not a single instance of such high mortality, be contrasted with the death-rate given with the use of the attenuated virus, when the animals so inoculated with it have received the ordinary care which should be provided in a zymotic disease of a febrile nature, I think you will admit the importance of the work done in this hospital.

In natural Distemper, the death-rate appears never to be under fifty per cent. in the particularly bred animals I have referred to this evening.

In induced Distemper with attenuated virus, it is a trifle under three per cent.

Furthermore, if it be borne in mind that the experiments have been largely made, not on the strong and healthy animals which succumb to the disease when they acquire it naturally, but the weak, the delicate, and the miserable pickings of large numbers of litters, I think that it will be allowed that the percentage in this treatment is smaller even than it has been shown to be; for in the experiments made only one strong animal has died, and that was from sheer neglect.

Personally, I have myself taken but few temperatures, but those who have taken them have been struck with the difference. In natural Distemper, after exposure to infection, I have told you there is great languor, loss of appetite, a rapidly rising temperature up to 106°, etc., etc., rapid emaciation, and an expression

of great anxiety, with a large number of dangerous *sequelæ*. In this induced Distemper I have had no case—and I have done a large number of the experiments—in which there was this languor, or a temperature of over 104°; and in this I am corroborated by Mr. Donaldson, of the Bridge of Allan, and Mr. Gibson, of Birmingham, who have on the one hand used the virus, and on the other watched cases for me. There has been no loss of appetite, and no expression of anxiety and emaciation; whilst in but one or two cases have there been any *sequelæ*, and then only in the deaths, which, as I have previously pointed out, were due to neglect and exposure.

As a type of the Distemper thus produced, I will give two instances of inoculated animals.

On the 7th of last month I inoculated four bloodhounds, the property of a well-known exhibitor who has lost a large number. On the 15th I received the following letter :—

"You will be glad to hear that the puppies are doing splendidly; they are all coughing and discharging at the nose; none are off their feed, and all are able to play about in their kennels."

On receipt of this note I wrote to Mr. Gibson, M.R.C.V.S., to take their temperatures; on the 19th he did so, with the result that all were normal excepting one, which was 102·2.

These hounds are now quite well.

Mr. Donaldson writes: "I inoculated the dandie on November 19th, temperature 101°; until the 25th it remained normal, when it rose to 102°; 26th, 102·$\frac{2}{5}$; 27th, 103·$\frac{4}{5}$; 28th, 104·$\frac{2}{5}$; 29th, 102·$\frac{3}{5}$; 30th, normal.

Mr. Donaldson remarks: "It showed signs of very mild Distemper indeed;" and he further observes: "If the rest of your cases turn out as this one did, you have every reason to congratulate yourself."

I draw attention to Mr. Donaldson's letter, because every case I have done myself has been of this description, and those done by others were similar, except where the greatest negligence has been manifest by those who had the animals in charge.

I have referred to twenty animals having become infected from those under treatment with this virus. Amongst them there has not been a single death, or a single instance of mischief, further than in one case in which there was bronchial complication in a dog eight years of age. In all, the disease thus acquired has been the same mild form, showing that the attenuation of the virus has been of a very complete character, and that it will take some time for it, by passing through a number of hosts, to return to its virulent character.

There now remains for me but one question to allude to. From

what I have stated, you are aware that before an animal is rendered immune to Distemper, it has to pass through an attack of this malady. I am, of course, speaking now of natural Distemper. The question is, will this mitigated form of the malady produce the same results as the virulent form? I have no reason to believe that it will not. I have exposed animals so treated to the most virulent disease, and Dr. Hamilton and Mr. Huband, as well as myself, have tried without success to induce the disease by these cultures a second time.

If then this is so, and the fact that out of all these animals only one has suffered from a second attack, which is probably the percentage of a second attack in the natural disease, I think we can conclude that, as in some other zymotic diseases, a mild attack gives immunity to the stronger.

TABLE OF RESULTS SHOWING THE DIFFERENCE BETWEEN NATURAL AND INDUCED DISTEMPER.

Natural Distemper: Brighton Show, October, 1890.—Number attacked, 86; number of deaths, 65.

Induced Distemper in Experiments.—Number inoculated, 80; number of deaths, 10.

N.B.—These ten deaths must not be taken as representing death from the effect of the inoculations, for eight of the animals were only about two months old, and were kennelled in an open field, without any shelter whatever, during damp and cold weather.

Number of dogs to which the disease was conveyed by the above inoculated animals, 20; number of deaths, 0.

Thus we have, excluding the animals which died from neglect of care, 92 in which the disease was produced by attenuated virus, or handed on by them, with a death-rate of 2 in 92. Compare this with the death-rate from natural Distemper, 65 in 86.

ON THE EFFECT OF CHLOROFORM ON HÆMORRHAGE IN OPERATIONS.

BY E. WALLIS HOARE, M.R.C.V.S., CORK.

IN the April number of the VETERINARY JOURNAL, there appears an excellent paper by Professor Penberthy on the subject of anæsthetics, as read before the Lincolnshire Veterinary Medical Association, and also a very interesting and practical discussion which followed.

One point which was raised had reference to the action of chloroform in regard to hæmorrhage after operation, and it is on

this that I wish to make a few remarks. I have seen four thoroughbred horses castrated while under the influence of chloroform—one four years old, the others three years old—and there was in all far less hæmorrhage than in operations without the anæsthetic. In fact, what was surprising was the very small amount of blood which flowed from the incision wound. In animals from this age upwards, there are great advantages to be gained from the use of the anæsthetic; there is no struggling, and the torsion can be performed both rapidly and safely. The after effects were also very satisfactory.

I had a cob over forty minutes under chloroform, while removing a very large scirrhus cord, and found the hæmorrhage far easier arrested than in cases where no anæsthetics were used.

There is no doubt but that the struggling of the animal has a great deal to do with favouring bleeding, and that the influence of the anæsthetic overcomes this by the quietude induced.

As to the danger of using chloroform in castration operations, it must be admitted that there is a certain amount of risk, because it is impossible to calculate, in many cases, the amount of the drug required. Some animals are brought under its influence in an exceedingly short space of time—only giving a few short struggles; others go under it very slowly, and show great depression before the proper stage is reached.

I have seen a case of a very old mare where it was impossible to destroy her with chloroform, even though Carlisle's bag was used.

Again, we find cases in which a very moderate amount will cause alarming symptoms, and a very long period of time will elapse before consciousness is restored.

I think a great deal depends on the susceptibility of each animal to the action of the drug, and that accidents will happen, even in the most skilled hands. However, after the owner of the animal is informed of the risk, and, on the other hand, of the advantages to be derived from the use of the anæsthetic, he will generally consent to the humane method of operating.

DISLOCATION OF THE SHOULDER OF A MARE SUCCESSFULLY REDUCED.

BY ROBERT GIBBS, M.R.C.V.S., TAUNTON.

THE subject of the above, a well-bred mare, whilst contending in a consolation race at a recent hunt meeting in this neighbourhood, and running almost a dead heat with another, suddenly fell. On rising she was found to be excessively lame; there was a prominent swelling on the front of the shoulder joint, with the leg three or four inches shorter than its fellows. I scarcely need mention to those who have had experience on such occasions, the many different opinions expressed—and most emphatically—by those who knew the least about the matter; some that the shoulder-blade was broken, others that the fetlock was the seat of injury. On examination we came to the conclusion that dislocation of the scapula and the humerus had occurred. The mare was, with a little difficulty, removed to an adjoining shed, and as the time was late and no van or float could be obtained, she was made as comfortable for the night as possible; 30 grains of morphia subcutaneously injected seemed to afford great relief.

The following morning she was removed to our Infirmary in a van.

The shoulder was fomented for two hours with hot water to soften and reduce somewhat the enormous swelling that had supervened.

The mare was then cast and placed under the lethal influence of chloroform, a band was put around her body at the saddle place, a three-block pulley made fast to the leg above the fetlock, and two men with steady and continuous traction to the fixed pulley gradually stretched the leg, until all at once the joint returned to its normal condition, with a loud "shock," like report of a small pistol.

After the influence of the chloroform had passed off she walked into loose box, and has subsequently shown but little inconvenience from the injury. Thinking this case somewhat unique, I have forwarded particulars for insertion in the VETERINARY JOURNAL, if worth acceptance.

I have before reduced dislocation of the shoulder of the ox, but never before practised on a horse.

Such injuries are comparatively rare in this animal, an experience extending over twenty-seven years only giving me one instance previously; and then, not thinking of the relaxing effect that chloroform produces, I did not try reduction of the luxation.

ON THE FUNCTION OF THE PNEUMOGASTRIC NERVE IN RELATION TO VOMITING IN THE HORSE.*

BY FORD TORRANCE, B.A., D.V.S., BRANDON, MANITOBA, UPPER CANADA.

MUCH attention has been devoted by veterinarians and others to the phenomena of vomiting in the horse, and many theories have been advanced to explain why the stomach of this animal, while unable to respond in the usual way to the action of emetics, will partially expel its contents under certain pathological conditions.

Williams says: "The occurrence of vomiting in rupture of the stomach, is said to be due to the muscular coat having first given way, thus allowing the mucous membrane to protrude, and the rugæ of the cardiac orific to become unfolded. This conclusion is true in part only, for vomition will occur in rupture of the colon or other intestine, and in dilatation of the œsophagus." In Chauveau's "Comparative Anatomy," translated by Fleming, we find the following explanation of the phenomena: "At one time there has been described a semilunar or spiroidal valve, which is opposed to the retrograde movement of the food; and at another time it was the oblique insertion of the œsophageal canal, resembling that of the ureters into the bladder, and which, by a mechanism analogous to these, proved an obstacle to the return of aliment into the œsophagus. Both suppositions are wrong. When we attentively observe the manner in which the œsophagus comports itself at its termination, it will be noticed that it is inflected downwards after traversing the right pillar of the diaphragm, and is inserted almost perpendicularly into the lesser curvature of the stomach. In opening into this viscus, the œsophagus does not widen into an infundibulum as in other animals; on the contrary, its calibre is here narrower than elsewhere, and its cardiac or stomachal orifice—completely obstructed by folds of mucous membrane—only occupies an infinitely small portion of the internal surface of the stomach." One more quotation from the "Physiology of the Domestic Animals," by R. Meade Smith, will serve to show the diversity of opinions on the subject. He says: "In the horse, as is well known, vomiting only occurs under very exceptional circumstances. The explanation of this fact, as pointed out by Colin, is to be found in the anatomical relations and physical conformation of the stomach. In the first place, in the horse the stomach is never in contact with the abdominal muscles; hence it is not readily subjected to pressure

* Read at the meeting of the Veterinary Association of Manitoba, held at Winnipeg, Upper Canada, on February 12th.

when the abdominal muscles contract. Again, as already mentioned, the portion of the œsophagus between the diaphragm and the stomach is larger than in carnivorous animals, and as the stomach cannot be supported by close contact with the diaphragm, the longitudinal fibres are unable to overcome the contraction of the cardiac sphincter. In carnivorous animals, which readily vomit, the œsophageal orifice is at the left extremity, far from the pylorus. An anti-peristaltic action tends to force food into the opening of the œsophagus. The gullet has dilatable walls and an infundibular insertion into the stomach, and marked radiating fibres. The pylorus is narrow and nearly always closed, while the stomach is large and directly in contact with the diaphragm and abdominal walls, and is thus in the best possible condition for being subjected to pressure through the contraction of these muscles; while the œsophageal fibres are supported through the contractions of the diaphragm. In the horse, on the other hand, or the hare, or rabbit, the œsophageal orifice is in the middle of the lesser curvature of the stomach, and near to the pylorus. Its orifice is always closed by a powerful sphincter muscle. It passes obliquely through the walls of the stomach, and is further obstructed by folds of mucous membrane, and the pylorus is large and nearly always patulous. Subjection of the stomach to pressure in the horse will, therefore, still more closely close the œsophageal orifice, and will force the contents into the small intestine. Occasionally, however, vomiting has been noticed to take place in the horse. Under such circumstances, it is a symptom of the greatest gravity, and in most cases it will be found to be due to the partial rupture of the walls of the œsophagus."

When the foregoing theories are examined, it is seen that they offer plenty of reasons to explain why it is physically almost impossible for the horse to vomit, but do not explain why vomiting should occur during rupture of the stomach or intestine; and it is to this point that I wish to direct your attention. The secret lies, I think, in the control of the cardiac sphincter by the pneumogastric nerve. When the pneumogastric nerve in a dog is divided, the cardiac sphincter remains firmly closed, and vomiting is impossible. The pneumogastic nerve, then, must send inhibitory fibres to the sphincter muscle, and when a nervous impulse is sent along this nerve, the contraction of the muscle ceases, and the opening dilates and allows the passage of the food. It remains to be seen how this action of the pneumogastric nerve is induced by rupture of the stomach. As you are aware, the terminal filaments of the left pneumogastric nerve are distributed over the surface of the stomach near the cardia, while the right passes back to the solar plexus, mesentery, and liver. When rupture of the stomach

takes place, there is at once a quantity of alimentary matter set free in the abdominal cavity, where it must irritate the smooth peritoneal covering of the viscera, and this irritation causes—by reflex action of the pneumogastric nerves—the relaxation of the cardiac sphincter, and consequent dilatation of the œsophageal opening. Regurgitation of food then takes place from the internal pressure of gas forcing part of the stomach's contents into the now open end of the gullet, from which it passes by reversed muscular contraction to the pharynx, and is ejected through the nostrils. This theory will also explain those cases of vomiting which occur without distention of the stomach or other symptoms of gastric derangement. I will describe a case of this kind, which came under my care some time ago. The subject was a pony, employed in a light delivery wagon, and had been run into by a horse driven in the opposite direction at a high rate of speed. When seen by me shortly after the accident, I found a deep punctured wound on the neck, caused by the point of the shaft, which had entered at the base of the right jugular furrow, and, narrowly escaping the vein and artery, had penetrated upwards and backwards as far as the vertebral column. The external wound was small, but the internal parts were much bruised and lacerated. The wound was bathed with antiseptic lotion, and allowed to remain open to permit drainage. The injured parts were much swollen the next day, and the day following I found the pony discharging a quantity of stuff from the nostrils, which at first glance looked like pus, but which turned out on examination to be alimentary matter vomited from the stomach. There was no Tympanitis, no pain, or uneasiness; but the pony stood with the head down, and every minute or two the chin was drawn in towards the chest, and a pellet of food could be seen passing rapidly up the gullet to be discharged through the nostril. It was about an hour since the pony had eaten his morning feed of oats, and from the quantity of regurgitated matter on the ground in front of him, he had evidently been vomiting for some time. There was nothing in the appearance or condition of the pony at the time which could, by any flight of imagination, be supposed to have caused the vomiting, and my attention was, therefore, directed to the wound, which I found more swollen than before, so I concluded that it must have in some way excited the vomition. I had the wound bathed continuously with a refrigerant lotion, and as the swelling partly subsided, the vomiting ceased as suddenly as it had begun. The explanation of the phenomena which I would offer is this. The course of the right pneumogastric nerve down the neck, in close proximity to the carotid artery, brought it through the tissues

injured in the wound made by the shaft, and either by the pressure of the swollen tissues upon it, or by inflammatory changes in the nerve itself, it partially inhibited the cardiac sphincter of the stomach, allowing the opening to dilate, and by perverted nervous action caused the regurgitation of the food. This explanation of the case gains further support from the fact, that a few days afterwards, when I was obliged to plug the wound with sponges to check an alarming secondary hæmorrhage, the vomiting came on again for a short time, and then ceased. This case, as far as my reading and experience go, is unique, and if any member present has ever seen one similar, I would very much like to hear of it.

Vomition in horses also occurs without being caused by rupture of the stomach or bowel, but accompanied by symptoms of acute indigestion; and I think the vomiting in these cases may arise from the irritation of the stomach by certain indigestible substances, which have a specific effect in producing it. Professor Robertson mentions having seen several cases of this kind, which were induced by eating wild haws. It is quite possible that other substances not usually eaten by horses may have the same effect, if taken accidentally into the stomach, or eaten through a depraved appetite. But this is a point upon which we require more light, and I will not dwell upon it. I am sure that every member present knows some facts connected with this much-debated subject, and I hope that the reading of this short paper will be followed by a free discussion, from which much benefit will be derived by all.

Editorial.

THE TERMS "VETERINARY" AND "VETERINARIAN."

THE Royal College of Veterinary Surgeons appears to have embarked upon a crusade against persons who employ the term "veterinary" as a prefix to some establishment, or branch of trade or business, and whose names do not figure in the Register of Veterinary Surgeons; and in one case, so far as it is a test one, it has met with an equivocal success. That victory was obtained in a Police Court, but whether it would have been confirmed had the case been moved to a higher court, where the evidence for the prosecution would have been more severely scrutinised, is extremely doubtful. Certainly, the Royal College will need to porduce much better testimony on behalf of its claim to the sole possession of the words "veterinary" and "veterinarian" than was adduced at Westminster, when—fortunately for the College—the magistrate who heard the case alluded to, appeared to know as little about the history of our profession, or the terms under discussion, as the expert called on behalf of our Corporation. A brief glance at the proceedings of the trial, as reported in the daily papers, will show what a narrow escape the College had, and what insecure ground was selected to tread upon. A horse-shoer was sued by the Royal College for professing to be qualified to practise a branch of veterinary surgery, contrary to Section 17 of the Veterinary Surgeons Act of 1881, by having on his signboard, beneath his name, "South Kensington Veterinary Shoeing Establishment." This description, it was said, occupied two lines, the first one concluding with the word "veterinary," and it was contended on the part of the prosecution that it was calculated to deceive, and to lead people to the belief that the defendant was qualified to practise that branch of veterinary science connected with the shoeing of horses. The defendant had been applied to to remove the word "veterinary" from his board, and had declined to do so. The expert engaged by the prosecuting solicitor, and who, by the way, was a F.R.C.V.S., and therefore should have known something of the matter, said it was the practice of some veterinary surgeons, particularly in the country, to use a forge. Prosecuting barrister: "In your judgment does the use of the word 'veterinary,' as employed by the defendant, imply that he is qualified to practise veterinary surgery?" Witness: "I know of no other signification attaching to the word. The word was never used in this country until it was introduced by a French veterinarian and the Veterinary College was estab-

lished." The magistrate said only that day he noticed a tradesman who had up the announcement that he was a hygienic bootmaker. Was the adjective there not on a par with the defendant's use of "veterinary"? Witness: "Hygienic has been used for years; veterinary has not. It is a word we coined ourselves."

Now it is difficult to conceive any evidence more erroneous or misleading than this, though it led to the conviction of the horse-shoer.

In the first place, horse-shoeing is not a branch of veterinary science, but a mechanical art practised by persons who may know nothing of veterinary medicine or surgery. It is true that forges are kept by some veterinary surgeons, just as hotels and other establishments are; and it is also true that many veterinary surgeons have paid much attention to perfecting the art of shoeing, as they have the construction of stables, harness, etc., but in the practice of their profession they are not called upon to maintain forges—many do not, and a still larger number object to them.

With regard to the use of the word "veterinary" as applied to a shoeing-forge, it is difficult to ascertain when it was first employed. It is probable that horse-shoers borrowed it to indicate improved shoeing, when Professor Coleman, soon after the establishment of the Royal Veterinary College, directed his attention to the shoeing of horses and published his well-known treatise on this subject. His notions were largely adopted all over the country, implying, as they did, enlightened views and a more rational system of managing horses' feet. And as these views were introduced by a veterinary authority, and gave promise of better workmanship on the part of the craftsmen who carried them into operation, there is every probability that this was the primary, and is the present reason for coupling veterinary with improved shoeing.

But has the veterinary profession any claim to the exclusive possession of the words "veterinary" and "veterinarian"? Only a person utterly unacquainted with the history of veterinary medicine could advance such a statement, as that these words were never used in this country until introduced by a French veterinarian, and that the word "veterinary" was coined by ourselves.

It is well known to those who are even slightly acquainted with the progress of our profession, that these words occur frequently in the writings of such Latin authorities as Columella, Vegetius, and Varro; and that one constantly meets with *veterinarius*, *veterinaria*, *veterinæ*, *veterina animalia*, and *veterinaria medicina*. And the terms re-appear continually in the hippiatric treatises of the Middle Ages and subsequent periods, until they are familiar as household words. All this every student should know.

And so far from its being a fact that these words were coined by ourselves, and were never used in this country until introduced by a French veterinarian—St. Bel, we presume—we find them employed in the seventeenth century. If any one will take the trouble to look up Sir Thomas Brown's "Vulgar Errors" (B. iii., Cap. 2), he will find proof of this, and in Blount's "Glossary," edition of 1674, he will also discover

the following:—"Veterinarian, he that lets mules or horses to hire, a hackney-man, also a horse-leech or farrier."

The adoption of the word "veterinary" by any one does not, and cannot, imply that he is qualified to practise veterinary surgery, else we should have others besides keepers of shoeing-forges liable to prosecution, such as those who designate themselves veterinary instrument makers, veterinary drug merchants or manufacturers, veterinary bandage makers, etc. And with regard to the relative ages of the words "veterinary" and "hygiene," it has just been stated that the former is as old as the days of the Roman writers, but we may fairly challenge any one to find hygiene in an English book published before this century, or even fifty years ago. From this it will be seen that the Royal College had a very narrow escape from disaster, and that a defeat would have reflected very severely upon it, as it would have betrayed the existence of an unpardonable degree of ignorance—or something worse—which would have been difficult to explain away. As it is, this cannot be considered a test case in any respect, and if it is decided to proceed against persons who employ the word "veterinary" in any other than a professional sense—as in horse-shoeing, instrument making, or drug manufacturing—the Royal College must be prepared with evidence that will bear investigation as to accuracy and justness. If the claim to the prescriptive right to this word is valid, it should not require hard swearing to establish it.

But it will have to be seriously considered whether the Royal College is not acting *ultra vires* in this matter. The Veterinary Surgeons Act certainly does not warrant such action, as it only refers to persons who adopt deceptive designations for themselves, and makes no allusion whatever to places, trades, or manufactures. And the Charter of 1844 gives no such right, as it only claims for graduates of the Royal College the exclusive claim to the title of veterinary surgeon—a designation introduced with the foundation of the Royal Veterinary College, towards the end of the last century, and evidently derived from the French "Médecin Vétérinaire," its equivalent, and which appears in veterinary literature soon after the creation of veterinary schools by Bourgelat. The claim to this title, if it could ever have been enforced, which is extremely doubtful, was allowed to lapse, and could not be protected until our Act of Parliament was obtained. In attempting to secure sole right to the words "veterinary" and "veterinarian," we are making a demand which, it is to be feared, we cannot sustain, and which will, at any rate, need better evidence to support it than was offered at the recent trial. Care must be taken that the Royal College is not made to appear ridiculous or unfair, or anxious to become a persecuting institution.

NOTES ON THE TREATMENT OF INDIGESTION IN SOLIPEDS.*

BY M. CADIX, ASSISTANT VETERINARY SURGEON, 3RD CHASSEURS, FRENCH ARMY.

I MAKE no pretence of publishing any new or infallible treatment for indigestion in the horse. I only, in the following notes, bring forward a comparative study of the various drugs recommended, and the value of each in the treatment of this affection.

1st Observation.—On the morning of 6th December, 1889, I was called to see a mare that had eaten some straw and about a kilogramme of hay, and presented the following appearances:—Dry mouth, injected conjunctivæ, dilated nostrils, strong pulse, anxious expression of countenance, quickened respiration, stiffness of the loins, distended flank, and hard abdomen.

In the stable she frequently turned round to look at her flank, pawed the ground, and kept on lying down and getting up with great care. From these symptoms I diagnosed the case to be one of intestinal indigestion.

A draught composed of 10 grammes each of camphor and ether was given; the mare was clothed and walked about, and soap and water enemas, with sulphate of soda in them, were given every half-hour. At midday there was no change, the mare if left alone trying to lie down, and putting her nose to the ground, which she kept on smelling at. Sulphate of soda, acetate of ammonia, alcohol, and infusion of camomile were given successively, but they seemed powerless to overcome the torpor of the digestive track and to re-establish its secretions. In the evening the patient was very much worse, covered with perspiration, and trying to roll over on the ground. In the morning she was very much worse, lying down on her side, the nostrils widely dilated, the conjunctiva injected, the pulse small, and the respirations much quickened. The prognosis was very bad, and the animal appeared to be dying; but, as a last resource, I gave, by means of a pravaz syringe, 10 centigrammes of sulphate of eserine in 10 centimetres of distilled water. The result was nil.

I then resolved to try nitrate of pilocarpine, but without much hope of success. At ten o'clock, 10 centigrammes, in 10 centimetres of distilled water, was subcutaneously injected at the side of the neck. Five minutes afterwards the mare was profusely salivated, which lasted for three hours. Eight minutes after the injection she made violent expulsive efforts, and passed five or six balls of fæces, coated over with mucus, and although the bowels had been completely paralysed for twenty-four hours, still, during the hour following the administration of the eserine, she had eight motions. At 2 p.m. the mare began to try and eat her litter, and three days afterwards was discharged cured.

2nd Observation.—On the 13th October, after having, with a good appetite, eaten 1 kilogramme of hay and about 2 kilogrammes of oats, a mare was taken out to exercise, and on returning to the stable, her rider noticed she tried to lie down and paw the ground. On seeing the animal, the mouth was dry, the conjunctiva slightly injected, the pulse strong, the nostrils dilated, respirations quickened, loins stiff, the right flank swollen, and the abdomen hard and somewhat painful. I diagnosed this case also as stomatic and perhaps intestinal indigestion.

The patient was gently exercised, and had administered sulphate of soda, ether, acetate of ammonia, alcohol, infusion of camomile, and, at the same time, glycerine enemas, but without any relief. Three hours after the commencement of the attack, I administered a subcutaneous injection of 10

* Translated from the *Recueil de Méd. Veterinaire* for February 19th, by J. A. Nunn, F.R.C.V.S., Principal, Lahore Veterinary School, Punjab.

centigrammes of eserine, but without any result. At 5.30, or four hours and a half after the first seizure, 10 centigrammes of nitrate of pilocarpine in 10 grammes of distilled water was subcutaneously injected on the left side of the neck. At 5.34 there was great salivation, and at 5.45 she passed several pellets of fæces, which must have travelled a considerable distance, as I had just examined the rectum and found it empty. Fæces and gas continued to be expelled, and at 7 p m. the patient was out of danger.

3rd Observation.—On the 15th October another mare was seized in the same way as the preceding cases, but, profiting by former experience, the nitrate of pilocarpine was administered at once, at 2 o'clock. At 2.4 salivation appeared, which lasted till 4.30. At 2.12 there was an expulsion of gas and several pellets of fæces afterwards, at 2.16, 2.24, 2.40, and 2.55. At 3.30 the animal ate a small quantity of hay, and was out of danger.

A friend of mine, a civil practitioner, to whom I was speaking of the excellent results I had obtained with the nitrate of pilocarpine, has informed me that he has used it successfully in two cases of indigestion in which the usual line of treatment and the sulphate of eserine had completely failed.

The deductions I draw from these observations are that nitrate of pilocarpine has a special action in the treatment of indigestion in the horse, and is greatly superior to both stimulants and the sulphate of eserine.

THE HORSE-SICKNESS OF SOUTH AFRICA.

In an interesting article in the *Fortnightly Review* for April, Sir John Willoughby gives an account of the occupation of Mashonaland and the journey thither, in which he alludes to the fatal equine scourge of South Africa—the Horse-Sickness—and its ravages among the horses of the force with which he marched towards Central Africa. Speaking of the Macloutsie camp, he says: "The elevation is 2,270 feet above the sea level, and the situation up to the present has proved most healthy for the men, but the reverse for the horses, as the mortality from horse-sickness during the past year has been considerable, even during those months when most other places appeared to be free from the disease. This deadly sickness is of two kinds, the one called 'thin-sickness,' the other 'dikkop.' The symptoms of the first begin with slight running of mucus from the nose, general dulness, loss of appetite and rapid falling away in flesh. Then follows a more copious discharge, with difficulty of breathing, and though this state may continue for several days, the end is almost always the same, for the lungs become choked with mucus, and suffocation ensues. The early symptoms of 'dikkop' are more noticeable, as the effect of the poison is more rapid. The underlip, nostrils, and hollows above the eyes become swollen, and blowing precedes the discharge, which is almost purulent on its first appearance, and becomes more so every hour, and the sufferer often dies of suffocation within twenty-four hours of the first signs of the disease. *Post-mortem* examinations show that the lungs, heart, and liver have been acutely inflamed and rapidly disorganised. All kinds of remedies have been tried and every attempt made to discover the causes of the sickness, but all in vain; and a large fortune still awaits the discoverer of a cure, or even of a preventive of this deadly disease. The fact of our having lost in six months 160 horses out of 500, and that out of all attacked only five recovered, testifies to the terrible nature of the disease."

It is important, and very serious, to find this scourge prevalent in Mashonaland, and at such a considerable elevation. It is to be hoped that investigations into its nature and prevention will continue to be made.

KOCH'S TUBERCULINE.

We have already made known the results of experiments made with Koch's "tuberculine" by Gutmann of Dorpat, Sticker of Cologne, Delvos of Gladbach, and in France. Further experiments have been reported, and others are being carried on.

The Imperial Sanitary Office of Berlin has published the results of investigations undertaken by Professors Roeckl and Schütz, of the Berlin Veterinary University, under the direction of Dr. Koch. They were made on two cows, recognised as highly tuberculosed, by Professor Eggeling, and on a heifer as a control animal. In both cows there was febrile reaction eleven hours after injection of the tuberculine; there were also observed swelling, redness, and increased sensibility around the inoculation punctures a few hours after the operation. There was no reaction in the heifer. Both cows, on being killed, were found to be extensively tuberculosed. The heifer was healthy.

At the Toulouse Veterinary School, Professors Labat and Conte experimented on a tuberculous cow, which showed all the usual signs of lung implication, though no bacilli could be found in the scanty nasal discharge. After inoculation with the tuberculine the temperature began to rise from the first to the ninth hour, when it had reached 39·8° cent., then gradually fell to normal—38·4° cent. Thirty-six hours afterwards another injection was given, when the temperature rose to 40° Cent., in twelve hours, after which it slowly descended, and in twelve hours was 38·5°. The inoculated places were painful, and swollen as large as a pigeon's egg. At the autopsy the lungs were seen to be much diseased—tubercles and cavities, the serous membranes covered with "grapes," and the liver and bronchial and mesenteric gland studded with them.

The Lyons Faculty of Medecine entrusted Professor Arloing to institute experiments with tuberculine on diseased cows. Nine infected with Tuberculosis were inoculated with from one to five centigrammes of the fluid, and all gave evidence of febrile reaction, while in six healthy cows it produced no effect. Arloing admits that such has been the result of his experiments, and he is even disposed to believe that it might be repeated in a number of cases; at the same time, he thinks it is necessary to be on guard against exaggerated optimism, and to conclude that veterinary medicine is now in possession of a means as sure as simple for establishing the earliest diagnosis of bovine Tuberculosis. Such a conclusion should be based on:—(1) The absolute fidelity of the reagent; (2) the genesis of a reaction so strong and evident as to remove the least hesitation from the mind of the practitioner, who should not be misled; (3) the insensibility of non-tuberculous animals to the effects of the fluid.

Remarking that it has not proved infallible in mankind, Arloing admits that it is no more trustworthy in animals. He has observed that it produced no effect whatever in cows condemned as tuberculous; while he has seen it produce modifications in the temperature of a stirk and heifer, as intense and variable as the dose injected beneath the skin was small or large. In minimum doses of from 4 to 20 milligrammes, the rectal temperature rose from 4 to 8-10ths of a degree in one of these animals, and 1 2° in the other, five and six hours after an injection of 10 milligrammes.

Some hours afterwards 40 to 50 milligrammes were injected, and the temperature rose 1·4° to 1·9° in four hours. The reaction was highest in one animal after an injection of 40 milligrammes. At the autopsy of this heifer there was not the slightest trace of tubercle.

And among the very worst tuberculous cows the reaction was not always so marked as to remove doubts. In one cow which was severely affected with pulmonary and peritoneal Tuberculosis, a different effect was produced

at different times: 30 milligrammes caused a rise of 1·7° at one time, 100 milligrammes 0·9° at another, and 200 milligrammes only 0·4° on a third trial.

Must we conclude that the disease is present if, relying upon tuberculine, we only obtain four or five tenths of a degree increase in temperature, by injecting 200 milligrammes?

Finally, Arloing found a tuberculous cow which gave no reaction at all, after receiving two injections of 10 milligrammes. He therefore admits, as the result of his experience, that Koch's tuberculine cannot, by itself, be considered a certain diagnostic agent in Tuberculosis; for supposing its qualities were always identical—which is doubtful—non-tuberculous animals give a reaction, while tuberculous ones do not always manifest a sufficient reaction to assure conviction. The old elements of diagnosis, including inoculation, cannot be dispensed with; but tuberculine may be employed as a means of information possessing a certain value, though it must be regarded with circumspection.

From the *Giornale di Vet. Militare*, we learn that experiments with this fluid have been made upon glandered horses by Drs. Leonardo and Achille. A horse affected with pulmonary Glanders and Farcy, after inoculation exhibited a very marked reaction. In the course of time it was observed that a certain amelioration had taken place in the state of the lungs, and that the Farcy ulcers rapidly and completely healed. Full details are promised of these most wonderful results.

Henocque and Capitan, in France, have tried tuberculine on monkeys supposed to be tuberculous, and on one which showed no signs of the disease. The latter died ten days after the last injection, evidently from Tuberculosis, which was found to be the case on an autopsy being made. In one of the diseased monkeys there was no reaction at all, though when it died extensive Tuberculosis of the abdominal organs was discovered. Another monkey, supposed to be tuberculous, received a large quantity of tuberculine without reaction.

We have received from Mr. E. F. de Jong, of the New Veterinary College, Edinburgh, the translation from the *Recueil de Med. Vétérinaire*, of a detailed report of the experiments already alluded to in the March issue of this journal, and for which we thank him.

FORMULÆ.

For Diarrhœa in Calves.

THE following has been given by Froehner as a remedy for diarrhœa in calves, and according to Weigel it has yielded good results in the most severe cases.

Salicylic Acid } of each	.. ..	℥iss.
Tannic Acid }		
Camomile Infusion..	.. ..	℥xviii.

To be repeated every three or four hours.

For Humid Eczema in the Horse and Dog.

Brœur states that he has obtained excellent results from the following, in cases of humid Eczema in horses and dogs.

Tannic Acid..	.. ..	℥j.
Yellow Vaseline	.. ..	℥v.

ANILINE OR PYOKTANIN.

ANILINE dye, or *Pyoktanin*, as it has been named in Germany, is now coming into use in that country as an antiseptic and astringent remedy in veterinary practice. Professor Eggling has employed it in the treatment of Foot-and-mouth Disease with surprising success, the affected parts being dressed with a solution of the dye, 1 to 100 of water.

Mehrdorf, of Breslau, reports most favourably of its use in the treatment of this malady. It was applied to 1,293 animals, of which 1,261 were oxen, 28 pigs, and 4 goats, in all the different stages of the disease. The parts affected were brushed with a solution 1 : 100, then 1 : 500, and, lastly, with 1 : 1000. In cases where applied at once, the animal recovered within twenty-four and forty-eight hours.

It may be mentioned that Eggling applied the solution by means of a syringe.

In a recent number of the *Monatshefte fur prakt. Thierheilkunde*, Professor Schlampp, of the Munich Veterinary School, alludes to the antiseptic and germicide properties of Pyoktanin, and gives illustrations of its wonderful value as demonstrated in the surgical clinic of Professor Hahn. The first and most important feature in it, perhaps, is that it is not poisonous, and does not coagulate albumin.

For recent wounds—as immediately after operations—as well as for those which are old, suppurating, and of an unhealthy kind, it has been employed, and with better results than with any other agent; as it brings on a favourable healing process, and alters the character of bad discharges.

For ulcerations of the skin—as those which occur in Distemper of the dog—a watery solution of 1 : 5000, applied by means of a small, soft brush, has been used, with the result that any foul smell present has been destroyed, and the sore has quickly presented a smooth, healing surface. In suppurations of the skin, the effect of its application has been extraordinary, especially in those deep wounds caused by such injuries as dog bites, when the subcutaneous connective tissue is infiltrated with pus. "Grease" of the legs of horses has been treated in all forms and stages, and it has been found superior to any other remedy; as not only does it stop the discharge, but it allays the pain and swelling. In decubitus gangrene (brought about by lying on the side too long) it has likewise been most beneficially employed, being applied by the brush four or five times a day.

In middle-ear Catarrh of dogs it has rendered good service at all stages when applied thoroughly once to three times a day, by means of a brush—large or small according to the size of the middle ear. In some cases a tincture acts more powerfully and promptly, and may be dropped into the ear. Schlampp gives its strength as 1 of aniline to 100—500 of absolute alcohol; a half or whole teaspoonful being sufficient for an ear. The tincture should be slightly warmed before being applied to the ear.

It is suggested that the aniline might be of great service in Catarrh of the respiratory mucous membrane; being given by inhalation. It has been tried in this way in bronchial Catarrh, and appeared to diminish the pain.

Altogether, the reports from Germany are so much in favour of the employment of this material as an antiseptic and desiccant, that we think it well deserving of a trial in this country. Its innocuousness is a strong recommendation.

THE JOHN HENRY STEEL MEMORIAL.

We have much pleasure in informing our readers that the following gentlemen have signified their desire to join the Committee of the above:—

A. J. Rogerson, 228, Camden Road, N.W.
F. Barrett, 419, New Cross Road.
J. Sutcliffe Hurndall, 2, Gloucester Terrace.
J. Penberthy.
J. D. Barford, Southampton.
W. R. Emery, 26, Spital Street, Guildford.
William Penhale, Barnstaple.
J. P. Heath, Southernhay, Exeter.
B. Glover, Army Remt. Depot.
Sidney Villar, Harrow-on-the-Hill.
E. Faulkner, Manchester.

There are, no doubt, a great many of the deceased's old students who would be glad to assist the Committee, but are prevented by an undue amount of modesty. The Committee is unable at present to reach them directly, as their whereabouts is difficult to find.

Through the kind assistance of Mr. Hurndall, the Committee hope to be able to appeal directly to them, but we would point out that if a Scholarship is to be created, the Committee must economise as much as possible. The Committee will therefore be grateful if the old students will kindly come forward spontaneously.

We may add that the Treasurers are now prepared to receive subscriptions, so perhaps those gentlemen who have promised support will kindly forward the same, as the Committee desire to publish the amounts. In the meantime, our readers will be glad to learn that the Southern Counties Association has subscribed £5, the Western £5, and the Central Society is preparing to act in a very generous manner with its ample resources.

The Treasurers' addresses are.—

Dr. Fleming, C.B., Cathcart Lodge, Tyrwhitt Road, St. John's, S.E.
Mr. F. Wragg, 17, Church Lane, Whitechapel, E.

This appeal to the profession should need but little urging or commendation. Its object is two-fold:—To perpetuate the memory of an earnest worker, so that his example may incite others; and to benefit the profession, by encouraging and rewarding merit in the most advantageous manner. On the response which is made will depend the success of the movement, of course; and it is therefore hoped that the appeal will find a responsive echo in a large number of hearts.

As evidence of the esteem in which Mr. Steel was held in Bombay, it may be mentioned that recently, at the opening of the Patho-bacteriological Laboratory, presented to that city by Sir Dimshaw Petit, and in the establishment of which the deceased took great interest, reference was made by several of the speakers to the heavy loss sustained by his death. Lord Harris, Governor of Bombay, paid a graceful tribute to his memory, and read the following official remarks from the Government of India.—"The Government of India have heard with much regret of the decease of this able and zealous officer, whose career, had he been spared, would doubtless have been highly distinguished, both departmentally and in the spheres of veterinary education and science. As an author, his works were favourably known to the profession, both in India and in England, and he succeeded in making some valuable contributions to bacteriological research. In the launching and subsequent management of the Bombay Veterinary College, Mr. Steel is shown by the reports received from the Bombay Government to have

displayed unusual capacities, both of organisation and instruction, with the satisfactory results that the veterinary education furnished to the students is of a higher character than has been previously attained in India, and that the practical efficiency of those who have obtained the College diploma has, in several instances, already been proved by their employment under various Governments and Native States throughout the Empire."

TRANSMISSION OF TUBERCULOSIS BY COW'S MILK.

At a meeting of the Académie de Médecine on February 24th, M. Auguste Ollivier presented a communication on the transmission of Tuberculosis by cow's milk. Two months previously he had been called in to a girl, aged 20, at Chartres, who was suffering from acute Tuberculous Meningitis. Her parents were both very robust, and she herself had had no previous illness to speak of, and lived under excellent hygienic conditions. On December 14th, 1890, she complained of headache, which gradually became worse in spite of antipyrin; on the 25th she was restless during sleep; on the morning of the 26th coma supervened. There was then paralysis of the limbs, with squinting in both eyes upwards and to the right. There was also profuse perspiration, with almost incessant convulsive movements of the face and limbs. The coma gradually deepened till death, which occurred at nine o'clock the same evening. The girl had been educated at a convent in Chartres, where, within a few years, Tuberculosis had attacked twelve pupils, five of whom had died. It appeared that on November 26th, 1889, the veterinary inspector had condemned the flesh of a cow between nine and ten years old which had been slaughtered that morning in the Chartres abattoir. The animal seemed to be in good condition, but there were tubercles in the lungs, the peritoneum, and the paunch, while the udder was "completely stuffed with them." This cow had belonged to the convent where the patient had been educated, and its milk had for nine years been consumed by the pupils and others in the house. Between October, 1887, and the date of the slaughter of the cow, one of the pupils died of tuberculous Peritonitis, one of general Tuberculosis commencing in the mesenteric glands, and three of Pulmonary Phthisis. Another pupil developed tuberculous disease of the elbow, and six others showed evident signs of tubercle of the lungs, but on being removed from the school, and kept for considerable periods in the country, recovered. In none of these cases was there any family history of tubercle. The patient whose case M. Ollivier reports had left the school four years before the onset of her fatal illness, but he is nevertheless disposed to trace the infection to the milk of the diseased cow which she had drunk during her stay in the convent. The moral he draws from the whole story is that, in the words of the opinion formulated by the Académie de Médecine itself last year, "it is prudent to use milk only after it has been boiled." In the discussion which followed, M. Nocard stated that some eighteen months previously a large cattle breeder had sent him the viscera of a fine calf, four months old, which had died suddenly. He found the mesenteric glands hypertrophied, caseous in the centre, stuffed with tuberculous granulations, and swarming with Koch's bacilli. As the calf had never had any milk but its mother's, M. Nocard declared that the latter must be tuberculous, the udder being probably affected. The animal, however, was a splendid specimen of her breed, had gained several prizes, and presented every appearance of the most perfect health. Nevertheless, it was found on *post-mortem* examination that the lungs were tuberculous, and the udder was infiltrated with extremely fine, almost microscopic, tuberculous nodules. Cases of this kind are, according to M. Nocard, by no means infrequent, and several have been reported as occurring in this country.

FELLOWSHIP DEGREE.

AN Examination for the above Degree was held on the 28th January, when the following gentlemen were admitted Fellows of the Royal College of Veterinary Surgeons:—

J. Laithwood, Esq.	Cheshire
R. Porch, Esq...	Bristol

Proceedings of the Royal College of Veterinary Surgeons and Veterinary Medical Societies, etc.

ROYAL COLLEGE OF VETERINARY SURGEONS.

QUARTERLY MEETING OF COUNCIL, HELD APRIL 7TH, 1891.

The President in the Chair.

Present:—General Sir F. Fitzwygram, Bart.; Professors Axe, Brown, Duguid, Penberthy, Pritchard, Williams; Dr. Fleming, Sir H. Simpson; Messrs. Barford, Briggs, J. Roalfe Cox, T. Greaves, Hunting, Kidd, Lambert, Mulvey, Rutherford, Simcocks, J. F. Simpson, P. Taylor, Trigger, W. B. Walters, Wragg, Mr. Thatcher (Solicitor), Mr. A. W. Hill (Secretary).

Letters were read from Messrs. Cartledge, Whittle, Malcolm, and Walley, regretting their inability to attend.

The following list of presentations were read:—

The *Australasian Veterinary and Live Stock Journal*, January, 1891.

Indian Veterinary Journal, in Urdu, by Mr. H. S. Pease.

"A Manual of Diseases of the Camel," by Mr. J. H. Steel.

"Calendar of the Pharmaceutical Society of Great Britain."

On the motion of Mr. P. TAYLOR it was resolved that the thanks of the Council be sent to the donors.

Correspondence.

Letters were read from Sir H. Simpson and Mr. Cartledge, resigning their appointments as examiners. From Professors Neumann and Nocard, thanking the Council for their election as Honorary Associates. From the College of Preceptors, with reference to the alteration recently made in the conditions on which their first and second class certificates had hitherto been recognised as qualifying for admission to the first professional examination of the Royal College of Veterinary Surgeons. From the Secretary of the Camden Town School, asking that the date of the forthcoming examinations might be fixed to commence on May 19th. From Dr. Fleming, enclosing a memorial from the Board of Examiners, suggesting the desirability of holding a conference between the Board of Examiners and the Principals of the teaching colleges, the result of such conference to be submitted to the Council of the Royal College of Veterinary Surgeons, with a view to action being taken to ensure greater professional efficiency in the graduates of the body corporate. From Professor Walley on the necessity of altering a resolution passed at the last Council meeting in connection with the examinations, to the effect that qualifying certificates must be placed in the obligatory subjects formulated by the Council. From Mr. Olver, of Tamworth, to the President, on the subject of practical examinations, and reply thereto by Mr. Rutherford.

The Council then proceeded to consider the letter received from the College of Preceptors.

The PRESIDENT said a communication had also been received from the Educational Institute in Scotland, complaining of the precipitancy with which the educational rules had been altered.

Dr. FLEMING said the constant alterations made were very unfair to the students. He thought some decision should be arrived at, so as to establish a system of examination which should not be altered for some two or three years at least.

Professor WILLIAMS suggested that the rules on educational matters should be recommitted.

Professor AXE thought the suggestion a very good one. A satisfactory scheme had been promulgated for the preliminary examination by the College of Preceptors in conjunction with the Council, but that scheme was afterwards altered by the Council, and was now most unsatisfactory. The sooner they reconsidered the whole question, calling to their assistance the College of Preceptors, and, if they thought proper, the Education Institute of Scotland, the better it would be.

Dr. FLEMING moved that the Educational Committee be re-appointed to consider the whole question of the education of students.

Mr. MULVEY seconded the motion.

Mr. J. F. SIMPSON suggested that Mr. Walters should be added to the Committee in the place of Mr. Wilson.

Dr. FLEMING said he would second that.

The motion was then agreed to.

Mr. MULVEY said Professor Walley's letter was met by a notice of motion which was now suspended, and of which the time had not yet expired.

On the motion of Dr. FLEMING, the consideration of the memorial suggesting a conference was postponed until the Council had dealt with the motion of which notice was given by Sir F. Fitzwygram.

The report of the Finance Committee was read.

Mr. WRAGG moved that the financial report be received and adopted, and that the Council authorise the Treasurer to draw cheques to defray liabilities.

Mr. WALTERS seconded the motion, which was agreed to.

Registration Committee.

The report of the Registration Committee was read.

Professor PRITCHARD moved that the report be received and adopted.

Professor WILLIAMS seconded the motion, which was agreed to.

Mr. MULVEY moved that the name of Mr. Miles be removed from the register of the Royal College of Veterinary Surgeons, in accordance with the resolution passed by the Registration Committee.

Mr. P. TAYLOR seconded the resoultion, which was agreed to.

Mr. MULVEY moved that the solicitors be authorised to institute a prosecution against Aaron James Leggett and P. Duffy for offences against the Veterinary Surgeons' Act, and that the seal of the College be affixed to those documents.

Mr. TRIGGER seconded the resolution, which was agreed to.

The Annual Report.

The SECRETARY read the draft of the annual report.

Mr. P. TAYLOR moved that it be adopted.

Mr. WALTERS seconded the resolution, which was agreed to.

Mr. WRAGG moved, "That a chartered accountant be appeared, the fee not to exceed five guineas, to audit the accounts of the College, and to prepare the annual balance-sheet; and that Mr. Richard Warner, chartered accountant, be so appointed along with Mr. J. Woodger, F.R.C.V.S.

Mr. P. TAYLOR seconded the motion, which was agreed to.

Scrutineers.

On the motion of Mr. J. F. SIMPSON, seconded by Mr. P. TAYLOR, the fol-

lowing gentlemen were appointed to act as Scrutineers :—Messrs. E. Batt, A. Broad, Edwards, Gibbings, T. B. Hamilton, A. Harris; Professor McQueen; Messrs. W. S. Read, H. G. Rogers, A. Rogerson, W. Roots, and S. Slocock.

The SECRETARY read the obituary list.

Dr. FLEMING moved that a vote of condolence be sent to the widow and family of the late Mr. William Woods, of Wigan. Those who knew him would sincerely regret his loss. He was an honest and an honourable man, and a worthy representative of the profession in his large town and district.

Mr. LAMBERT seconded the motion, which was supported by Professor WILLIAMS, and agreed to.

Committee re Koch's Lymph.

The SECRETARY read the report of the Committee.

Fellowship.

The SECRETARY reported that the following gentlemen had passed the examination for the Fellowship :—Messrs. J. Laithwood and R. Porch; and that some six or seven additional candidates had entered their names.

Professor AXE said for reasons which had arisen out of the letter of the College of Preceptors and the letter from Professor Walley, he gave the following notice of motion :—" That the Regulations passed on 7th January, 1891, as to Matriculation Examination be rescinded, and that the existing Regulations remain in force."

Charter Committee.

The SECRETARY read the report of the Committee.

Mr. MULVEY moved that the Report be printed and circulated amongst the members of Council, and that the discussion of the subject be adjourned till the next meeting.

Mr. J. F. SIMPSON seconded the motion, which was agreed to.

Honorary Associate.

Professor BROWN moved that Professor D. McEachran, of the Veterinary College, Montreal, be elected as Honorary Associate.

Dr. FLEMING asked if there was any precedent for this proposal. The Professor was already a foundation Fellow of the Royal College. They had no instance of any Fellow who had also been made an Honorary Associate. This honour was instituted for men who could not become Fellows.

Professor BROWN said he himself had both certificates.

Mr. HUNTING seconded the motion.

On a ballot being taken the numbers were eleven for and eight against. The bye-laws state that such a resolution can only be carried with the approval of two-thirds of the Council present, and the resolution was therefore lost.

The Royal Veterinary College.

Dr. FLEMING called attention to a report made by the Principal of the College to the Governors, stating that complaints had been made by some of the students that the practical examination was not rightly conducted, that some members of the Board did not attend, and were substituted by members who were not formally appointed, as required by the bye-laws of the Royal College of Veterinary Surgeons; that as many as twenty candidates were examined in one day, and that some of the students were examined by candle light. Being himself an examiner in the " B " section, he could not explain how this came about, but he had promised to make inquiries at that Council, so that an explanation might be given at the

next meeting of the Governors. It was also stated that the Royal Veterinary College had no power to interfere with the examinations. If that was the case he thought the Royal College should give it power. As Professor Brown was present, he might give some information on the subject.

Professor BROWN said he did not know that he could add anything. He had no notice whatever that a paragraph of a report which was confidentially written for the information of the General Purposes Committee was to be brought before the Royal College of Veterinary Surgeons, or that the Royal College of Veterinary Surgeons had any jurisdiction at all in the matter.

Dr. FLEMING was not aware that the report was confidential. It had been sent to all the Governors, and was really a public document.

Professor PRITCHARD thought the Council had nothing to do with the matter in its present stage. The complaint was made to the Royal Veterinary College. Why, then, was the Royal College of Veterinary Surgeons called upon to deal with it ?

Sir HENRY SIMPSON, as the only member present of the practical portion of the Class C Examining Board, who were alluded to in the report, wished to say how greatly he was surprised to hear that such a report should have been circulated under the authority of the Principal of the Veterinary School, who said, "So far as I have been able to ascertain these complaints are well founded." With regard to the statement that some of the members of the Board did not attend, and were substituted by representatives who were not formally appointed as required by the bye-laws, he said that, as far as he knew the bye-laws, in the event of any examiner being unable to attend, the Court would have power to select a qualified person to supply the vacancy *pro tem.* The filling up the vacancies was a matter of conference between the members of the Board, and the result was submitted to the President, who approved of the selection which had been made. As to the number of candidates examined on one day, he wished to explain that thirty-three students in all were examined in two days, sixteen on the first day, and seventeen on the second. The examinations were held in the third week of December, in thick foggy weather. They commenced at 10.30 a.m., and were concluded by 4 p.m. Possibly candles might have been used for the purpose of ascertaining such small matters as a thrush or a corn in the foot, or for examining eyes, but he could safely say that every student had a fair examination. He was extremely sorry that this matter should have cropped up. He had thought the feeling of the Principals of the schools was one of kindly confidence towards the Board of Examiners. He hoped the matter would not be allowed to drop, but that some of the representives of the Council, who were on the Board of Examiners, would request the general proposer to allow himself or some one who was present at that examination to attend that meeting, and explain exactly what the facts were. He very much regretted that such misleading remarks should have been addressed to a body of noblemen and gentlemen.

MR. TRIGGER moved: "That this Council regrets that such a report reflecting upon the examinations should have been handed to the Governors of the Veterinary College before any complaint was made to this Council, as to the conduct of their Examiners, and that having heard the explanation of the Examiners, they were of opinion that the examination was properly carried out."

Mr. MULVEY asked if the report was before the Council.

Dr. FLEMING said he brought the matter forward at the desire of the Chairman of the Committee of the Royal Veterinary College.

Professor BROWN said he objected to the report being considered before the Council at all, unless it were brought before them by the governing body of the College, and he knew the governing body of the College too well to believe that they would have done that without calling him into consultation

in the first instance. The thing had been brought there very much on the principle of exploding a mine. If it was decided by the Governors that his reports were to be handed about in any direction, he should simply decline to write another word.

Mr. GREAVES seconded the motion.

Mr. SIMCOCKS proposed as an amendment that the Council proceed to the next business.

Mr. HUNTING seconded the amendment.

The amendment was put and carried, eight voting in its favour and seven against.

Resignations of Examiners.

Sir HENRY SIMPSON, in referring to his letter of resignation, said that when he consented two and a half years ago to allow himself to be elected a member of the Examining Board, he was never told that he was undergoing any sort of inferiority, or was losing his position in any shape or way. He found soon after he had accepted the office, that on the part of a few of the junior members of the Council there seemed to be a very determined effort to lower the dignity of the office. Whether he personally was the object of that attempt it was not for him to say. He was not aware that his presence had been prejudicial to the Board, or that any conduct on his part could have induced men to make him the object of a set attack on the Board. They were told that the Examiners were the servants of the Corporation. He entirely objected to that. Could it be said that such men as Sir Richard Quain, Dr. Alfred Taylor, Dr. Burdon-Sanderson, or Professor Field, Mr. Pritchard, and Matthew Harpley were to be branded as servants of the Corporation; and if they were not considered to be servants, why was the present Board to be selected for that denomination? They had been charged with a serious dereliction of duty. Again, junior members of the Council came whining and saying, "Where are the reports? the Examiners do not make reports." The only duty of the Examiners in this respect was that a list of the successful candidates at each examination, signed by the Chairman of the Court, was to be transmitted to the President, and that the Court of Examiners were specially to notify to the Council the names of students who had passed the examination with great credit or with credit. Had that ever been omitted? The Examiners would be only too pleased to make any report which the Council might request, but they resented a piece of impertinent interference on the part of a few people who had not sufficiently studied the constitution of the College, and came forward to make complaints of this kind. On these and other grounds he had sent in his resignation. He was no longer a member of the Board, and his advice was that they should treat his successor better than they had treated himself.

Mr. W. HUNTING said the tremendous personality and self-consciousness of Sir Henry Simpson had made him incapable of looking upon this as a question between the Board and the profession. He had throughout dealt with it as a personal matter. It was perfectly true that there were no reports, and junior members, in asking that there should be, gave this very good reason, that unless the Examiners sent a written report to the Council, that body was never in a position to judge the deeds of the Examiners.

Mr. T. GREAVES protested against such altercation as they had latterly witnessed at that Council Board.

Professor WILLIAMS said that the Royal College was placed under very great disadvantage in having to consider these resignations at the present moment. The examinations were facing them, and he did not think the Council was prepared to propose any one to succeed the two gentlemen who had resigned. He would ask them to reconsider their decision, and to continue to act for a short period of time, perhaps to the end of the five years.

Personally, as Principal of the College, he could say that both these gentlemen had carried out their duties in a most admirable manner.

Other members of the Council having spoken to the same effect,

Mr. RUTHERFORD said it really was a very serious matter for the students and the schools standing so suddenly face to face with the appointment of three new examiners. New examiners meant new lines of examination, and it really was not fair to the students.

The PRESIDENT said Mr. Cartledge was unavoidably absent in Ireland, but no doubt he would be greatly influenced by Sir Henry Simpson's ultimate decision.

The matter was adjourned for a short time at the request of Sir Henry Simpson.

The Quarterly Meeting.

Sir FREDERICK FITZWYGRAM moved: "That the quarterly meetings be held on fixed days." He pointed out that it would be of great advantage to adopt this course, as the members could then reserve the days on which the Council met.

Mr. J. F. SIMPSON seconded the motion.

Professor WILLIAMS said it would be a great convenience to Scotch members if the meetings were held on Fridays.

Professor PENBERTHY moved as an amendment: "That the President fix the quarterly meetings on his election each year."

Dr. FLEMING seconded.

The amendment was then put and carried.

Sir F. FITZWYGRAM moved: "That special meetings shall not be summoned except on occasions of most urgent necessity." He said where members of Council where scattered over the length and breadth of the United Kingdom it was very inconvenient for them to come up frequently on uncertain days, and if they did not come it was possible that matters which they would seriously object to might be passed by a small council residing in the neighbourhood of London. He thought their meetings might be limited to the four quarterly meetings, with the exception of the additional statutory meetings which must be held.

Mr. GREAVES seconded the motion.

Mr. J. F. SIMPSON thought such a resolution, if passed, would hamper the hands of the President. He was not aware that any President would ever call a special meeting unless it was urgent.

After some further conversation the motion was withdrawn.

Sir F. FITZWYGRAM moved: "That thirty minutes, instead of twenty minutes, be allowed to each student at each table at the final examination, and also at the practical examination for horses and the same for cattle." He said there had been great complaints that young men, holding the diploma of the Royal College of Veterinary Surgeons, had been sent out into the world with very insufficient practical knowledge. It seemed to him that a quarter of an hour or twenty minutes was not sufficient time to anything like thoroughly test a young man in his practical knowledge, and there could be no objection to raising it to half an hour at the very least. In such a case twelve candidates would be quite as much as any Board of Examiners could be called upon to go through in a day.

Professor PENBERTHY seconded the motion.

Sir HENRY SIMPSON said, as a matter of fact, students were examined half an hour on the horse and half an hour on cattle, and the time was practically unlimited for the written examination. If Sir Frederick, instead of pressing his resolution, would be so good as to suggest that a conference should take place between the Principals of the schools and the Board of Examiners, very great good would result from it.

Sir F. FITZWYGRAM thought that the proposition for a conference was a very good one, and after the Council knew the result of that conference they would be better able to legislate. He would therefore withdraw his motion.

Sir HENRY SIMPSON expressed his thanks to the Council for the kind way in which most of the members had spoken with reference to himself. He had given the matter of his resignation his very serious consideration, and regretted to say he could not alter his decision.

The Council then proceeded to elect an examiner in the place of the late Mr. Woods, to act till the expiration of his term.

The gentlemen nominated were: Mr. J. F. Simpson, Mr. James Clarke, of Cupar Angus, Mr. W. A. Edgar, Captain B. Russell, Mr. W. Woods, Mr. W. Penhale.

Mr. J. F. SIMPSON declined to serve.

The ballot was then taken, and in the result Mr. James Clarke was declared to be elected.

The following gentlemen were then nominated to serve in place of and complete the term of office of Sir Henry Simpson and Mr. Cartledge:—Captain Russell, Mr. W. Woods, Mr. Malcolm, Mr. Robb, Mr. C. Sheather, and Mr. Duck.

The ballot was taken, and Messrs. Wood and F. Duck were elected.

Mr. J. ROALFE COX suggested that instead of the Examining Body recording their estimate of candidates by the terms "Sufficient," "Good," and "Very good," the middle term, "Good," should be omitted as superfluous. He also proposed that the term "Insufficient" should be substituted for "Bad," as much fairer to the students.

Mr. J. F. SIMPSON said this was a matter of bye-law.

Professor WILLIAMS said it would be a very good instruction to the conference.

Mr. COX said he would leave it in the hands of the Council.

The SECRETARY read the list of nominations of members of Council.

A vote of thanks to the President closed the proceedings.

WESTERN COUNTIES VETERINARY MEDICAL ASSOCIATION.

THE Eighth General Annual Meeting of the above Association was held at the New London Hotel, Exeter, on April 2nd. In the absence of the President (Mr. S. Burton), through illness, Mr. C. Parsons occupied the chair. There were also present Messrs. T. E. Baker, Crewkerne; W. H. Bloye, Plymouth; H. P. Chase, Tiverton; J. A. Collings, Exeter; C. H. Gollege, Sherborne; J. P. Heath, Exeter; W. Penhale, Holsworthy; and the Secretary, W. Penhale, Barnstaple.

Letters and telegrams, regretting inability to attend the meeting, were received from Professor Penberthy, Messrs. A. C. Stewart, T. Olver, G. P. Short, A. J. Down, W. Roach, G. H. Elder, F. E. Place, W. H. Thomas, T. Endle, and Mr. S. Burton.

The Secretary's and Treasurer's reports showed the Association to be in an increasingly good position, both as regards membership and financially.

Mr. W. Penhale, Barnstaple, was elected President for the ensuing year; Messrs. J. A. Collings, J. P. Heath, W. H. Thomas, F. Parsons, and T. Olver, Vice-Presidents; and Mr. W. H. Bloye, Secretary and Treasurer.

Messrs. Collings and Thomas were re-elected Dinner Stewards.

It was unanimously resolved to present five pounds to the Steel Memorial Fund.

A lengthened discussion, in which all present took part, then followed on—

1st. The proposed new Charter, and clause 9 of the old.

2nd. Is it advisable to purchase chemists' proprietary articles?

3rd. Should we admit reporters to our meetings?

Mr. PARSONS regretted that he should be compelled to occupy the chair through the illness of the President, but he felt quite sure that Mr. Burton had the best wishes of the Association for a speedy recovery. Speaking of a new Charter, he thought the laws which had been framed for the guidance and management of the profession needed some amendment, and a sensible Charter would be a very good thing. It was monstrous that important and busy men should be called on to serve on juries, and the hardship was felt to be all the greater when dentists were found to be exempt. He was utterly against purchasing chemists' proprietary articles when the composition was unknown.

Mr. BLOYE said that there could be no doubt that the profession was very apathetic when the last Charter became law; he, therefore, now saw no reason to abolish clause 9. The profession must accept the consequence of their apathy, and either remain outside the Council or stir up and qualify for the Fellowship. He thought men now joined the profession with the clear understanding that they could not sit on the Council without the superior degree, but he was clearly of opinion that it should be conferred on men who wished to obtain it, and who were members prior to the date when the degree was created in 1876, on the presentation of an approved thesis. The whole Council should certainly be elective, and although the dual appointment of examiner and councilman had worked fairly well, yet it seemed an anomaly in these days that a man should assist to appoint himself, as it were, to a lucrative and honourable post, fix his own salary, and sit in judgment on himself.

Mr. GOLLEGE thought the 9th clause was a very great hardship on the profession. Many a man joined our ranks in the hope of some day obtaining a seat at the Council-table, but was disqualified by this absurd clause, which was obtained at a time when every one was blindfold to its effects. Now almost all but Fellows, who wished to keep matters pretty much in their own hands, were for its abolition. He was against purchasing chemists' proprietary articles, of which we neither knew the composition nor the doses contained; if a mishap occurred, we should certainly be liable to severe censure for using articles of which we had no knowledge.

Mr. CHASE said there were many good and excellent members who would make good Councilmen, but were too busy to give the necessary time to the study which the obtaining of a Fellowship would require. He was of opinion the 9th clause should be abolished without delay, and he would strongly urge that it should be done. The whole profession was simply trapped into its passing. The only thing to be said in favour of chemists' proprietary articles was that, to a very busy man, it relieved him somewhat of the labour of dispensing, but on the whole he thought it should be condemned.

Mr. PENHALE (Holsworthy) was of opinion that the 9th clause should never have been in the last Charter at all, and ought at once to be done away with. The list of Fellows was so small, that there were few to pick from, and he did not think they had a greater capacity for business matters than members; the latter, he was certain, could safely be entrusted with the affairs of the College. He objected to the public press being present at the meetings on several grounds. It would destroy the social character of our meetings, give undue prominence to some members, and prevent others from speaking.

The questions were then put to the meeting, and the voting coincided with the opinion expressed.

The SECRETARY then read the following notes on two cases of "Discomyces Equi" invading the udder and spermatic cord respectively, by Mr. Harvey. He said: The few remarks I shall bring before you are of interest from several points of view—clinical and pathological—and as several matters are down on the notice paper, I will be as brief as possible.

Case I. (*Diseased Udder.*)—On March 1st, 1890, I was asked to see a mare with an enlarged udder. The owner had noticed something amiss for several weeks, but the duration of the disease was uncertain.

At first sight we thought the case one of scirrhus cancer, as the growth was very hard and the mare looked out of health. Abscesses formed and discharged often at this date, but beyond this there was no ulceration of the skin or retraction of the nipple. The left gland was unaffected, the right about the size of a child's head.

Tonics and iodine externally, with subsequent dressing of the gland with iodized phenol, failed to arrest the disease. From the appearance of the discharge, we diagnosed the case as one of Actinomycosis.

The disease continued to increase until November, when the inguinal region was fully occupied by the growth, the left gland being now also infected. The abdominal wall in front of the udder was also much thickened and hard, and suppurating at points, with œdema extending to the elbow on the right side. A fatal termination seemed probable unless the disease was quickly arrested, and injection of iodine into the substace of the growth was decided on:—Tinct. Iodi. ʒj to Liq. Acid Carbol, 2½ per cent. ʒvij.

In the first three injections ten drachms were employed every third day. The quantity was then increased, and a longer time allowed between each injection, viz., three ounces of the above mixture every ten days. The latter quantity injected caused œdema along the belly, which passed off in about a week.

It soon became obvious that the treatment was correct, as in a month nearly all suppuration had ceased, and the œdema had gone, except that which followed the injections. Iodine of potassium was given internally in rather liberal doses, and iodized phenol painted over the udder after injecting.

The mare returned to work in February, and is now in good condition, but at this date—March 30th, 1891—some swelling still remains, and a few more injections will be required.

Knowing that Professor McFadyean was engaged in an enquiry on the etiology of the scirrhus cord, I sent him a note of the case in November. He then requested me to forward some pus, as he suspected the fungus was the "Discomyces," first described by Rivolta in 1879, as invading the spermatic cord. Writing on the 10th of December, he says:—"I find the little granules present in the pus are colonies of the so-called 'Discomyces,' which, under a low power, may easily be mistaken for the Actinomycosis. I may mention that the Discomyces pus is usually very viscid and brownish, or coffee-coloured, and that, combined with the suppuration, there is generally very dense fibrous induration of the part." In connection with this, I may state that only a few drops could be injected at each point at first, as so much pressure was required that the top of the syringe was twice driven off the barrel. Ultimately ʒj could be injected at almost any point.

Writing again on December 18th in reference to the case, Professor McFadyean says:—"I formerly had the opportunity to examine the tissues in a fatal case which had its starting point in the udder, but I trust the iodine treatment will avert a fatal issue in your case."

Of course, the mare I have brought under your notice may have some internal organ already attacked by the fungus, which will ultimately kill her, but at present there are no clinical signs of such.

Case II.—About Christmas, 1887, I was consulted in reference to a two-year-old cart colt that was rather stiff in walking. I found the case one of scirrhus cord. The colt was castrated on May 7th, 1886. He was bred on the same farm as the mare above alluded to, and sold by auction in September, 1886. As the condition of scirrhus cord was not then looked upon as being

dependent on other than common causes, it was decided to wait until spring for operating, as the owner had not good accommodation in his yards.

On May 9th, both spermatic cords were removed as high up as possible. The right was principally involved. The colt improved in condition for a time, but in August it was found that the cords were larger than before. Two or three sinuses were found in the right flank discharging freely. The parts were again excised and the tissue tested by Professor Axe for the Actinomyces, who, however, failed to find the fungus. The pus, however, should have been tested at the same time.

The case made no improvement, and by November a sinus had opened close to the anterior spine of the ilium. Examination *per rectum* showed the pelvic cavity half filled with a new growth, very hard to the touch. Six weeks later the growth had extended considerably; the colt was round-backed, and the gluteal muscles were much atrophied. The temperature remained about 102°. The appetite was always good, and nothing was ever noticed amiss with his urine.

The colt was kept by the owner until February, 1888, when he was sent to the kennels.

Briefly, I found on *post-mortem* examination that the growth in the pelvis above alluded to had extended along the roof of the abdominal cavity to the right kidney, not a vestige of which remained. There were myriads of abscesses and colonies of the fungus, and the wonder is the animal survived so long. The posterior face of the liver was also attacked, and several large yellow spots could be seen, from which numerous smaller ones were sprouting out in all directions. The covering of the liver was not, however, adherent to the mass behind. The disease thus apparently spread by continuity and contiguity of parts.

These two cases show the importance of an early diagnosis and the use of the microscope. No time should be lost in removing a scirrhus cord until its non-specific character is assured. The methods of castration are probably of less import in its causation than we once supposed.

In conclusion, I may mention that on the farm where above horses were bred, several bullocks have from time to time been attacked with diseases of tongue and jaw.

A unanimous vote of thanks was accorded to Mr. Harvey for recording these cases and showing microscopical specimens, which were viewed with great interest. It was resolved to hold the next meeting at Exeter in September. The members then dined together, and the usual loyal and professional toasts were duly given and honoured.

W. PENHALE, *Hon. Sec.*

EASTERN COUNTIES VETERINARY MEDICAL ASSOCIATION.

THE members of this association held their half-yearly meeting at the Bell Hotel, Norwich, on February 10th. E. J. KITCHIN Esq., Norwich; in the chair.

Present, Messrs. Thos. Auger, John Cleveland, C. C. Clarke, F. C. Golden, Jas. Gooch, John Hammond, jun., C. G. Hunting, — Harles, E. J. Kitchin, J. D. Overed, A. H. Santy, S. Smith, W. Shipley, jun., James Thurston, — Wills, R. S. Barcham, (*Hon. Sec.*)

Letters of apology were read from Professors Walley, Axe, Williams and Pritchard, and Messrs. F. Wragg, W. Reedman, Wm. Shipley, sen., Wm. Bower, and Sir Henry Simpson.

Election of Officers.

The following gentlemen were elected for the ensuing year: *President,* Mr.

Wm. Bower, East Rudham. *Vice Presidents*, Messrs. A. H. Santy, J. D. Overed, and E. J. Kitchin. *Secretary* (re-elected) Mr. R. S. Barcham.

New Member.

Mr. John Hammond, jun., of Bale, was proposed.

The Next Meeting

Was arranged to be held at Lynn in the second week in July.

The question of the need of a New Charter was next discussed. Professor Penberthy, Messrs. Santy, Kitchin, Gooch, and Overed having spoken at considerable length on the subject, the following resolution was submitted to the meeting by Mr. Overed, and carried *nem. con.:* "That in the opinion of this meeting a New Charter is necessary; that both the Ninth Clause and the Dual Appointment as at present existing are both objectionable and injurious to the welfare of the profession."

The following paper was then read by Prof. PENBERTHY:—

ON EXAMINATION OF HORSES AS TO SOUNDNESS.

Mr. PRESIDENT and GENTLEMEN,—Nothing in the routine of veterinary practice calls for more consideration than the "Examination of Horses as to Soundness." The proper performance of the act requires the exercise of a wide range of professional knowledge, and in the majority of cases is followed by a remuneration well earned and, I think we may say, adequate. Than this, no subject has been more under discussion, lay and professional, nor is there another which at the present moment affords a wider field for disagreement, extrinsic and intrinsic. Hence I hope no apology is necessary for asking your further consideration of some points in relation to it, though when selecting it from among two or three subjects submitted to me by your Secretary, I was not alive to the fact of its having been so particularly before the profession of late as I now find it to have been. It is possibly a cause for regret that other matters of great importance should have so limited our time, but I will endeavour to confine my few remarks to certain aspects rather than make any attempt to go thoroughly into the whole subject.

Recent events occurring in the North of England have created a profound impression among practitioners, as to the great responsibility which attaches to the performance of this particular function; demonstrating the liability of being mulcted in heavy damages by a court of law, and sustaining the loss of reputation which this almost invariably entails. The feeling of insecurity is so great in certain individuals, that in speaking of the matter to me a well-known practitioner, whose practice has been for many years essentially an examining one, said he very much preferred not examining horses as to soundness at all. So that whether we admit it or not, this first law of nature, self-persevation, is specially forced on us and *should* be our primary consideration. By this I do not mean to imply that we may consider ourselves or our interests to the detriment of our client or his interests; for I hold that, in all honest dealing, by protecting ourselves we are protecting our clients, and we cannot admit for a moment but that it is the wish of every member of the profession that his services shall ever be associated with honourable transactions. To this I think we shall agree, as well as to the necessary condition that the examiner possess the professional skill and common sense essential to the formation of a just, and consequently valuable, opinion. *Primâ facie*, then, we can have little reason for complaint, as it seems to me that the only point on which a professional man may be indicted is wilful (criminal) negligence, or insufficient professional skill—always allowing that either is often more difficult to settle justly than judiciously.

Our experience, however, tells us there are bye issues responsible for

much of the trouble associated with the subject now under discussion. I am disposed to think that there are some questions we may put to ourselves, as to how much our own action is culpable. Do we ever consider what is asked of us by the practice now in vogue, and what we so often voluntarily undertake? More, I venture to aver, than is demanded of, or accepted by, the members of any other profession. What lawyer would be insane enough, after most thorough examination of a case, to state that his client's suit should be successful, and that in event of failure he would discharge the costs; or what practitioner of human medicine or surgery, after the most deliberate examination of a man, would certify (as we have it) that the examinee was sound, *i.e.* perfect —as ruled by Chief Justice Bert (But *v.* Osborne)—and indemnify him from all damage arising from developments of conditions which existed but were not recognised at the time of examination. Yet in the literature of horse causes we find that a horse, to merit the condition of soundness, must not possess even the "germs of unsoundness."

This leads us up to inquire what are the circumstances which bring this responsibility on the shoulders of the veterinary examiner—for responsibility undoubtedly exists, and each time we examine a horse and certify to its soundness or unsoundness we incur a risk. To me it seems that to the use of the terms sound and unsound we must attribute much of the mischief, and for the reason that these are so clearly defined by the law, which says soundness is "perfection," "freedom from disease" "anything which does now, or will at some future time, interfere with an animal's usefulness." We are told that these "words" are demanded by custom, and that the result of our examination must necessarily be associated with them. It is my humble opinion that the matter is entirely in our own hands, and that a general discontinuance by members of the profession of the terms would be a truce to much of the trouble connected with sale and purchase, while it would detract no whit from the value of our opinions as to the suitability of any animal for the purpose for which it may be required. I think we must at once admit that it is impossible for us to know that a horse is "sound" in the sense of the above definitions, which are legal precedents. I believe that veterinary science and art, and veterinary honesty have now reached that position which they deserve, and should demand that generous treatment which is accorded to other professions. I am open to admit that the general and lengthened use of the terms sound and unsound have caused these, in some cases, to be very convenient; but this does not, to my view, seem in any way equivalent to the inconvenience incurred by their general adoption. It may be suggested that any lessening of the responsibility in a strictly legal sense thus brought about, would encourage immoral practices, which in this mortal state have always to be provided against. I argue that though the immediate responsibility to the uncertain law may be removed, we should be none the less responsible. I believe it would be a means of estimating more definitely the value of professional advice in buying and selling, and consequently bring credit and cash to those deserving, as well as of broadening and deepening the mutual interests of practitioner and client. I would also wish to say that I do not for a moment allow that non-use of the term "sound" or "unsound" will relieve the wilfully careless, or those not possessing sufficient skill, from the penalties to which they are now liable.

Amongst questions most commonly raised when discussing this subject, is the "form of certificate," and we frequently hear the cry for uniformity of this important document which sometimes not only seals the horse's fate, but also that of the veterinary surgeon. The form now in common use always appeared to me strangely exciting to the litigious temperament. *I hereby certify, etc.*—and find him sound or unsound, etc. To my mind the very formal "certificate," as we call it, gives the layman the idea of some specially legal

document. The mental condition induced by having the worst of a horse deal requires very little to stir up the love of law, which is common to many men. I see no reason why the opinion as to fitness for certain kinds of work for which a horse is adapted by breed, conformation, etc., and the likelihood of a continuance in this state for natural periods, should be couched in special words or terms. Certainly the opinion will be more valuable, and surely a true and valuable opinion is, or should be, the only desideratum of all parties concerned. To state that a horse is "sound" is to me savouring of the dogmatic and arrogant, and by way of apparently lessening any impression of the kind I always prefer saying I detect no unsoundness, but I fear the law would recognise no material difference in the effect of the two wordings. I am sure that much trouble may be saved by the judicious wording of our written and verbal opinions. The power to do this must rest with the individual examiner, and it does not follow that a greater knowledge of men and things in general will detract from his knowledge of the horse.

While we submit to the custom of employing the terms "sound" and "unsound," it is necessary that we should have fixed ideas as to what constitutes legal soundness and unsoundness. Attempts have been made to categorically arrange the diseases and abnormalities which are the causes of "unsoundness." It appears to me that any attempt on the part of the veterinary profession, indirectly or collectively, to arrange what shall or shall not be a cause of unsoundness must always be abortive. We certainly may place in schedules these conditions, and suggest that such shall be a guide to us in use of the terms, but I fear this will never affect the legal aspect of the case unless we, as a body, determine and succeed in getting some statutory legislation on the subject. Though it will be well for us not to assume that we are lawyers, it is essential for us to understand that, while each case must be judged on its merits, the decisions of our law courts are made in accordance with rules laid down by Act of Parliament, and by former judgments taken as "precedents." Veterinary surgeons who give certificates of soundness or unsoundness should undoubtedly be familiar with these, for they are always subject to them; but because members of the R.C.V.S., individually or collectively, agree to such and such conditions, there is nothing to say that judgment shall be given on these lines. Neither statute nor precedent bear on every case, so that, after all, our professional judgment must be taken for much beyond these. It is here, of course, that there is danger in using the term sound or unsound.

Then, again, even when statute or precedent exist, there is the loophole of difference of professional opinion as to the existence or non-existence of certain causes of unsoundness. This difficulty seems likely to obtain to a greater or lesser extent for a long time, though our advance in general and technical education should rapidly diminish the chances of these differences. We do not hope for unanimity of opinion in matters it is not possible to settle, but we may ask ourselves the question as to whether we cannot give our opinions a little less dogmatically, and exercise and encourage courteous consideration for those of our professional brethren. I am sorry to make the statement, but I really believe that a large proportion of the cases which find their way to our law courts would never reach this distinction but for the unfortunate manner of expressing opinions sometimes excited by professional jealousy, as well as the great love for appearing in the witness-box which is possessed by some M.R.C.V.S.

In a court of law, it is for a jury of "twelve British haberdashers"—honest and true—to decide whether an animal was sound or not. If we think a common jury capable of coming to a fair decision on this subject, there might be an excuse for the veterinary surgeon to urge his client to seek redress by appealing to it. To me it seems much more reasonable that justice should

be measured out by one, two, or three arbitrators possessing technical knowledge, and that his or their decision shall be final. The public *exposé* of our differences would thus be avoided. In many cases where dispute existed and law appeared imminent, I have advised this means of settlement, and always matters have been arranged quietly, with less cost, and I believe on much sounder basis than could be hoped for from twelve honest and true of the non-expert type.

No one can have been much engaged in disputed horse causes without being impressed with the great uncertainty of the law, and that very frequently great hardships result, and this sometimes when the judgments have been based on precedent. For instance, it is ruled in law that a "splint" not causing lameness at the time of examination is not an "unsoundness," and if a veterinary surgeon, after due consideration, deemed the situation in conjunction with the size, etc., of such as dangerous, his opinion in law would count for nothing (Lopes in Silk *v.* Jones Smith). Though we know that in the majority of cases a splint is of no importance, we must allow that there are splints and splints, and under some circumstances they may totally incapacitate an animal for certain work for which he would be otherwise fit. In this case I again avoid the use of a specific "word," and call the condition a "bony enlargement," but if I were in the witness-box asked if this is what is usually termed a splint I am bound to affirm that it is. I am then confronted with the above, and my opinion goes for nothing on this point. In every way I think disputes as to "soundness" could be most satisfactorily settled by "arbitration," the arbitrators being men of practical and professional experience; and that in the majority of cases it is in the power of the veterinary surgeon to advise and influence the adoption of this course.

With a view of avoiding legal responsibility, and at the same time facilitating a transaction which we candidly believe would be advantageous to both parties—buyer and seller—it is the custom of some to use such qualifying terms as "practically sound," "usefully sound," etc. I do not see that "sound," *i.e.* "perfect," can be affected by any word affixed, and I am pleased to state that instructions are issued to officers in charge of the R.V.C. practice, that "practically sound" shall be used under no conditions, though this does not restrict qualification of opinion in any other words. The case can be equally well met without the use of the word "sound," by simple statement of the opinion that the animal is likely to be useful for the special purpose for which it may be bought, the purpose always being named when we so express ourselves. If a warranty is given for a special purpose, then according to the ruling of Mr. Baron Alderson, the term sound may be susceptible of the qualification arising from the purpose for which the *warranty* was given.

And here I may say that I think our examinations should be made with a knowledge of the purpose for which the horse is required, and that such an opinion as we are able to arrive at as to the animal's fitness should be given in candid terms. I believe this would encourage what is legitimate, and a practice of not purchasing horses on certificates given to other individuals, and which are now often hawked about for weeks and months.

We must remember too, that the law requires all patent defects to be mentioned, and that what "we place on our certificates cannot be altered by *parole*." That is to say, if a horse has a small pimple on the withers, a slight cough, or apparently slight inflammation of the conjunctiva, we may not say in our certificate this horse is "sound" and mention by word of mouth the above; for unless these are placed on our certificate, I fear we are liable in case of Fistulous Withers, Roaring, or Blindness, to pay our client damages for loss; and it makes no difference in law whether the parties know of the existence of any defect or not. In the attempts to diminish the onus, it is suggested

that on examination we should not have regard to conformation; I will only say that I feel it my duty, if in my examination I think any peculiarity of conformation, or aught else, will render the animal incapable of properly performing his duties for natural periods, to take cognisance of it, and mention it accordingly.

I think, too, we must recognise that a source of great danger will exist if the veterinary examiner become specially interested in the transaction beyond arriving at and giving his professional opinion.

After some further remarks on the subject in general the speaker submitted amongst others the following points on which a profitable discussion might possibly ensue:

1. The desirability of discarding, when possible, the use of the terms "sound," "unsound," "practically sound," etc.

2. The necessity for using formal certificates; or whether each individual subject should be examined and referred to on its own merits in familiar and convenient terms.

3. The desirability of less dogmatic expression; and means by which professional courtesy and consideration may be cultivated.

4. Is arbitration practicable and advisable, and what influence has the veterinary surgeon in its adoption?

5. What advantage can accrue to the scheduling of certain abnormalities, except as a nominal guide to professional unity.

The Discussion.

Mr. SANTY, in opening the discussion, said that frequently, especially when examining for dealers, you were compelled to be dogmatic and give a certificate of *sound* or *unsound*. In the case of a private individual a letter in some cases was practical and even preferable to a certificate. He did not consider a list of abnormalities of any great value as a guide; his plan was to notice every defect and to point out those to his client which he thought might be of any consequence; he was sure the public would soon be able to gauge the worth of our opinions and employ us accordingly. The ordinary fee of 10s. 6d. he thought quite inadequate to the risks we ran, when examining for litigiously disposed individuals.

Mr. OVERED advised great care as to what you put on paper; always act conscientiously and from a high moral standpoint, both towards your client and your *brother practitioner*, in case of dispute. He thought we had frequently to thank ourselves for appearing in law courts; the want of professional courtesy and consideration, and the dogmatic expression of opinion in cases of arbitration, whether from a desire to obtain credit of superiority or not, were often the means of causing litigation. The sliding scale idea he thought a good one; to examine a £200 animal for the same fee as a £50 one was certainly ridiculous.

Mr. SMITH always adopted the sliding scale of £50 animals 10s. 6d., over that value £1 1s.

Prof. PENBERTHY, in reply, said that when he hinted that our fees were in comparison to the risks we ran, he thought that £1 1s. was the ordinary fee —with a sliding scale upwards. He recommended in all our examinations to use broad views. The sliding scale is very common in many parts, and acted well.

Mr. KITCHIN exhibited a splendid specimen of that very rare thread-worn the *Filaria immitis*, which he found in the ventricles of the heart of an Irish terrier.

A most cordial vote of thanks having been given to Prof. Penberthy and to the Chairman, Mr. Kitchin, the meeting terminated.

R. S. BARCHAM, *Hon. Sec.*

THE CENTRAL VETERINARY MEDICAL SOCIETY.

(*Continued from page* 271.)

Now all this seems clear when you have seen a case, and when you have had it explained. Probably no man ever yet diagnosed his first case without the guidance of some other person's experience; at any rate in my first cases I must confess to having depended on the guidance of other men—either verbal or written. When I had detected the symptoms and was told the cause I easily saw it all, and seldom fail now to diagnose for myself. The first discoverer of the lameness achieved his diagnosis on *post-mortem* examination; anatomical experts explained its rationale, and now we all know. I have occupied all this time on this case to ask you if there may not be other cases in which we have either overlooked some part of the signs indicated by motion, or in which perhaps for want of the positive evidence of a *post-mortem* examination we have not yet learned to interpret really indicative motions? I confess I do not derive as much information from action as I think I ought. I am careful to avoid deceiving myself, and have always a doubt—a mental reserve—unless I can clearly see a definite peculiarity, and as clearly understand its significance. I cannot always run a lame horse out, and derive definite information as to the lameness from action only. I am even egotistical enough to doubt sometimes whether the positive opinion offered by my friends is really founded on fact, or merely on hypothesis. I do not go so far as to say a practitioner cannot be right in his diagnosis if he cannot give good reasons for his opinion. I allow that some men may—not from intuitive perception, but from repeated and close empirical observation—be able to diagnose the nature and seat of lameness without being able to express their knowledge. A gamekeeper may be a dead shot at moving objects, and yet quite unable to describe how he does it. A musketry instructor, I can imagine, may be thoroughly versed in his science, know all about gravitation, initial velocity, trajectory, etc., and yet be hardly able to hit a moving barn-door fowl. We practitioners, similarly, may be good anatomists and careful observers, and yet unable to diagnose lameness so well as less scientific men. The best practitioner is he who combines, in proper proportions, science and practice.

Before you give us your varied experiences I may just directly refer to the regions which are said to afford some diagnostic indications by the changes of position or action that accompany lameness in those parts.

And first of *the Shoulder*.—This is a very wide region, and includes a vast number of anatomical structures. We do not expect that any peculiarity of position or action shall indicate exactly the structure diseased, and we may well be content with recognition of any peculiarity which merely points to the region—Have we any? One position—that in which a horse stands with the knee bent and the foot placed forward level on the ground—I think is diagnostic of shoulder injury. The foot cannot be placed flat on the ground and in advance of the other foot, whilst the knee is bent, unless the shoulder is depressed below its normal position; in other words, unless from pain or loss of power the muscles of the shoulder fail to retain the whole region at its proper level.

There are two peculiarities of action which are generally suggestive of "shoulder lameness"—dragging the toe, and bringing the leg forward with an outward circular motion of the foot. Both may be accepted as indicative, because if the muscles of the shoulder do not raise the leg the foot is not lifted high enough to clear the ground in progression; the trailing of the foot is an obstacle, and the horse tries to avoid it by swinging the limb forwards in an outward direction. When the toe is dragged we have an even worse condition indicated, if it be due to defect in the shoulder, because there must

then be not only inability to raise the limb but also to extend the leg. Dragging the toe is not always indicative of shoulder mischief—a stiff knee may cause similar action. Neither is the circular motion of the fore limb in progression always indicative of shoulder lameness; it is seen sometimes in foot lameness, and I take it the explanation is that the horse, fearful of striking the ground with his painful foot, swings it outward as he extends it so as to avoid even the possibility of contact. It must then, I think, be allowed that we have some valuable indications of shoulder lameness in the position and action of the leg, but they are not always to be relied upon, they may accompany injury of other parts, and we must only look on them as diagnostic when we find other local signs, or when we fail to find disease or injury of the other parts which may give rise to similar symptoms.

When position of a limb or its action has indicated lameness in the shoulder we are still a long way from locating it. Almost identical are the peculiarities which are caused by such widely different conditions as sprain of the spinata muscles, of the flexor-brachii, or of the extensor-brachii, not to mention injuries to the shoulder joint. I do not know of any peculiarity of position or action which enables us to differentiate these four lesions, nor am I able to recognise any peculiarity which helps us to diagnose fracture of the first ribs or injury to the serratus-magnus, both of which cause "shoulder-lameness."

The elbow is a region which some authorities say is indicated as the seat of lameness by certain peculiarities of position or action. I do not recognise any. When a horse suffering from painful disease of the elbow is forced backwards he drags the limb, and is quite powerless to move it back by its ordinary muscular action. This is not very indicative, because the same condition obtains in severe injuries of the shoulder muscles. I have seen it stated that elbow lameness is indicated by the position of advancing the foot, and putting it flatly on the ground whilst the knee was bent; but this is also a common position in shoulder cases, especially when the extensor-brachii is affected.

Knee-lameness is a term I have often heard applied to the action of a lame horse, and there are practitioners who profess to diagnose carpal mischief by the action. Of course, when the joint is only half flexed during progression we have a very clear indication, but these cases are rare. In cases of splint close to the knee-joint I have not noticed any definite action which I consider at all diagnostic, and in those cases when nothing is to be seen or felt I am always sceptical about the indication given by action alone. The man who diagnoses "knee-lameness" by action may possess some intuitive power not given to other men, but I cannot help a strong suspicion that "making a guess" is more correctly descriptive of his mental process than "forming a judgment." In no case where it is possible to flex the knee of a horse easily and completely by raising the foot and bringing it in apposition with the elbow do I recognise any action of the limb which indicates disease of the knee.

Splint-lameness is very common, and, perhaps, there are cases in which alteration of the horse's action precedes the appearance of any enlargement or other local sign. When a horse stands squarely on his feet in the stable, *walks* out sound, but is very lame at a *trot*, I believe we have an indication of splint as a cause. I incline to give even greater weight to such an opinion when the lameness is more marked in going down hill than up.

Leaving the fetlock and foot just now, I will pass to the regions of the hind limb, and I may say at once that I consider both position and action here of less value as indications than in the fore-limb.

Hip-lameness is often said to be indicated by the action, but I am not prepared to admit any special peculiarity. I remember once hearing a jobmaster, who was seeing run out a horse lame behind, say, "Well, it's at one end or

the other," and I have often since noted the correctness of his observation. A horse with a partially fractured pelvis will often show the exact form of action evidenced by another with a bad sand-crack, or with a bad toe nail-bind. Whereas the fore-leg is hung to the body by muscles, the hind-limb has only a movable joint connecting the extremity with the pelvis. When the hind-foot comes in contact with the ground at each step, the impact is felt throughout the whole bony column, and any painful part is jarred whether it be in the middle of the leg or at either end. When a careful examination of the foot gives negative evidence we may then allow that action does often indicate the hip—the whole leg being moved stiffly as though all in a piece.

Stifle-lameness is uncommon, except, perhaps, in very old horses, which sometimes show on *post-mortem* examination changes of the joint never suspected during life—porcelanous deposit on the articular surfaces, and even loose bones being discovered. That condition of the patella which prevents a horse getting his leg forward, and which fixes it in an extended position backwards is, of course, diagnostic of the region affected. With this exception, there is no peculiarity of action indicative of stifle-lameness. There not only is not, but there cannot be, for the stifle is so connected with the hock by muscles and tendons that the two joints can only work together. Extension or flexion of one necessitates just a corresponding extension or flexion of the other. Whatever limits motion in one limits motion in the other to exactly the same degree.

Hock-lameness. There are many practitioners who credit themselves with ability to diagnose hock-lameness by the peculiarity of the action. From what I have just said it is evident that I must deny their power. I say that the peculiarity of action they accept as indicating hock-lameness, is lameness common both to the hock and the stifle, and that no man can possibly distinguish the action caused by hock disease from that which is caused by stifle disease. This statement, however, does not detract much from the practical value of the alteration of action, erroneously thought to be specially indicative of hock mischief. The alteration recognised may, it is true, be traceable to disease of either joint, but the hock is so much more frequently injured or diseased than the stifle, that in ninety-nine cases out of a hundred the cause of altered action may be found in the hock. So-called "hock-lameness" may then be accepted as recognisable if only we remember the one-in-a-hundredth time when it happens to be the stifle.

Fetlock-lameness offers no special peculiarity of either position or action to indicate the seat of disease.

Coronet-lameness, when it arises from pain only, offers no special indication by changed position or action of a limb. When, however, the joint becomes more or less fixed—as in ringbone—we have a definite peculiarity of movement, as the foot is limited in its motion, and the heel comes to the ground first in an unusually prominent manner. I have not been able to verify a statement (which, however, I accept as correct) that in cases of Ringbone affecting the hind coronet the foot has a definite peculiarity of action. It is brought forward, but it is not placed upon the ground at its extreme limit of extension—it is drawn back a little just before it is put down.

Foot-lameness is certainly the most common form of lameness, especially in aged horses. Most men fancy they can diagnose the existence of pain in the foot by the way in which the horse either stands or moves. In acute cases, such as proceed from corns or binds by nails, I am a little doubtful as to this ability, and in some rare cases where a fracture of some of the bones has taken place within the hoof, I must positively deny the accuracy of action alone as an indication of the seat of lameness. I quite allow that there is something *almost* indicative in the way in which a foot is "nursed" when great pain exists within the hoof. I recognise the way in which a horse re-

fuses to put any weight on the painful foot, and perhaps there is, during progression, a suddenness in lifting it from the ground which may almost be called a snatch; but all the peculiarities are just as marked in other cases —say, as in fracture of the pastern bone. The action, which is sometimes held to be indicative of foot-lameness, is really only suggestive of some cause of lameness to be found below the knee and hock.

Some foot diseases are almost always indicated by position or action. Laminitis is clearly so. Navicular disease is generally accompanied by "pointing," and usually is the cause of greater lameness just after a rest than during a journey. But this cannot always be relied on. Horses "point" and have no disease of Navicular, and they may go lamer the further they go with that disease. Some authorities even go so far as to say that the disease may exist without any lameness, and I have more than once seen every acknowledged sign in a horse which, after a few months, has gone sound and remained sound for the rest of his life.

To sum up shortly, I allow that the position in which a horse stands and the manner in which he moves do afford much useful information concerning the seat of lameness. I deny that they indicate the affected region with anything like the accuracy credited to them by some men. To accept hock-lameness, hip-lameness, foot-lameness or shoulder-lameness as specific forms of action which indicate distinctly these different regions as the seat of lameness is a great error, and one that has been far too widely allowed. The public really believe in such nonsense, and credit practitioners with some gift of acute perception which makes them almost oracles. This notion is no good to the equine patient nor to his owner. It is no good to our profession, for it simply favours the pretensions of the man who is best able to disguise his ignorance. Anatomical knowledge, care in observing, and correct reasoning are all necessary to the formation of a diagnosis. The position and action of a limb are useful aids, but they have been allowed too prominent a position and have given opportunity for dogmatism to prevail.

Discussion.

Professor PRITCHARD said their capability of diagnosing lameness must depend to a considerable extent, if not entirely, upon practical experience, and upon long practical experience. There were one or two very useful points which all should bear in mind. One of the most useful, perhaps, was to be able to determine whether the horse was lame when the weight was placed upon the limb, or lame in the movement of it; if this be right it fell rather foul of something they had heard from Mr. Hunting. Respecting knee and shoulder lameness, considering lameness in the shoulder as a whole, it was impossible for the horse to get the leg forward, but the horse lame in the knee might get the whole limb forward. That, he thought, should be a guide to them as to whether a horse was lame in his knee, or was suffering from some affection of the shoulder. He considered there were diagnostic symptoms of lameness in the foot. He had never seen a case of lameness from Ringbone where the animal did not put the foot unusually forward and impart pressure to the back part of the foot, relieving the front as much as possible; from a mechanical point of view this must be so. Lameness arising from splint was very common in London. He had over and over again noticed, even when splint-lameness occurred in the old horses, that there was a peculiar movement of the limb in an outward direction every time the animal put its foot to the ground, and he thought this movement was, when well marked, sufficiently diagnostic of this particular cause of lameness. Mr. Hunting had dealt with two symptoms only, but he did not think he should lightly pass over other aids than peculiarity of action, to enable us to diagnose causes giving rise to lameness. There was a great deal

to help them in the history of the case; then there were the appearances of the limb, swelling, heat, and alteration in the form of the limb, or foot. He thought he could name other circumstances which should be taken as guides to diagnosis, but feared he had already occupied too much of their time.

Professor AXE said although he had not the pleasure of hearing the whole of Mr. Hunting's paper, he had noticed two or three points which might with advantage be discussed, but first he would suggest that, so far as he knew, it had never been affirmed by any member of their profession that the various forms of lameness to which reference had been made were capable of being diagnosed by the position of the limb alone, or by the action alone. Not only so, he thought to rely on such slender evidence would be very unsafe and unsatisfactory, and an unadvisable course for any of their profession to pursue. Diagnosis in dealing with lameness was at all times a difficult matter, and required for its performance all the ingenuity they could bring to bear, and all the means and methods which were at their disposal. Regional diagnosis was not always a difficult matter; that was to say, they found no difficulty in referring lameness to a particular part; but anatomical diagnosis was on every occasion a matter requiring the fullest consideration and care; by that he meant that while they were capable of referring lameness to a particular joint or region, it was, as a rule, with the greatest difficulty they were enabled to refer that lameness to its anatomical seat. With regard to Ringbone he had observed that the position of the excrescence very materially influenced the position of the foot and limb; for instance, an enlargement at the lower part of os coronæ in front would cause the foot to be brought to the ground with extreme dependence on the heel, but if the Ringbone was situated higher up, and if it did not encroach on the hoof, then there was an inclination on the part of the foot to be brought down toe foremost. Mr. Hunting had suggested that every description of shoulder-lameness gave rise to symptoms of the same character. The shoulder was a very important joint acted upon by numerous muscles, and it had been suggested that when any of them suffered injury that the same symptoms presented themselves; he was not prepared to endorse this—these were questions which could not be gone into at that hour of the evening, and with the chairman's permission he proposed that the matter stand adjourned until the occasion of their next gathering.

This proposition was seconded by the Honorary Secretary, and on being put to the meeting was carried unanimously, Professor Axe kindly undertaking to re-open the discussion on 5th March next.

SIDNEY VILLAR, *Hon. Sec.*

SCOTTISH METROPOLITAN VETERINARY MEDICAL SOCIETY.

THE Annual Meeting of the above Society was held in the London Hotel, Edinburgh, on February 25th, 1890, the retiring President, H. G. Thompson, Esq., in the chair. A large number of members and friends were present, including Professors W. Williams, H. Lewis and W. O. Williams, and Messrs. James Clark (Coupar Angus), W. D. Connochie (Selkirk), Pottie (Paisley), C. Phillips, A.V.D., C. Cunninghame (Slateford), Hutton (Kelso), A. Boyd (Melrose), McFarlane (Greenock), W. Donaldson (Bridge of Allan), Reid (Leith), Brownlie (Coatbridge), Bowhill (Darlington), Borthwick (Kirkliston), Cameron (Berwick-on-Tweed), R. Rutherford (Edinburgh), P. Moir (Edinburgh), W. De Jong (New Veterinary College), Bowman (Portobello), Houston (Stirling), Messrs. McDougall (Helensburgh), Burnett (Maybole), Constable (Inchture), Storie (East Linton), Connochie (Ayton), D. Young (Editor *North British Agriculturist*), Hutchinson (Dundee), Cowe (Balhousie), and representatives of the Press.

The following gentlemen were nominated for membership:—Messrs.

Donaldson (Bridge of Allan), Houston (Stirling), Bowman (Portobello), McDougall (Helensburgh), Constable (Inchture), Burnett (Maybole).

Mr. RUTHERFORD moved that the next Quarterly Meeting of the Society should be held at a large agricultural centre, such as Perth or Stirling. It was finally agreed that Perth should be visited for the May meeting.

Professor W. WILLIAMS kindly consented to read a paper on Pink-Eye.

A discussion followed as to the desirability of nominating a representative of the Association for the Council Board of the Royal College of Veterinary Surgeons at the coming elections. Several members present were proposed, but declined the honour.

Mr. R. RUTHERFORD, in pursuance of his notice of motion at last meeting, moved that the Society take steps to increase its funds by increasing the membership, and raising the amount of annual subscription.

Mr. H. G. THOMPSON (Aspatria), in his retiring address, referred to the question of dishorning. He was surprised, he said, to hear so many professional men talking about the cruelty of the practice, and he was afraid they had too many of these drawing-room, patent-slippered gentlemen writing about cruelty. He also expressed the opinion that they were indebted to some of the foreign feeding stuffs, which were imported into the country, for many of the diseases among stock, and he particularly mentioned anthrax as traceable to this source; so far as he had observed, it was a dietetic disease.

Mr. JAMES CLARK (V.S., Coupar Angus), the new President, then took the chair, and delivered his inaugural address, of which the following is an extract:—

"I now propose to offer a few remarks regarding our profession.

No profession can stand on a sure and solid foundation unless its graduates have acquired a fairly good education. This cannot be said to have been a question seriously considered by the Council, and, strange as it may appear, the initial step towards this much desired end was first adopted by the schools. More satisfactory action is now being taken by the Council to remedy this outstanding defect, and they now propose to take the educational test under their own wing, and make it a standard one all round.

The future of the profession is, to a great extent, in the hands of our Council, and every retrograde step must be strenuously opposed. It is evident that greater numbers are now entering our colleges; this would be no matter for regret, providing a suitable class of students entered. As our profession is a small one, and by no means a rich one, the question may be asked, Why are greater numbers wanting admittance?

My interpretation of the situation is that our entrance and professional examinations are easier than in other professions, such being the case, it behoves the R.C.V.S. to impose more stringent passes; and, if necessary, a more lengthened time of study, and that a higher standard of excellence for the practical be insisted on. In no profession does a good practical knowledge prove more indispensable than in ours. The want of such to a young veterinary surgeon proves a serious barrier to his success.

I do not propose to give any detailed scheme, as this has been fully given in the *Veterinary Record* during the past year. I think it must be generally admitted that our colleges are well staffed, and give the requisite teaching required by the rules of the R.C.V.S., with one exception, and that is practical training. In the medical profession the advantages are of the first importance, the infirmary and hospitals offering an opportunity for clinical study, of which veterinary students are to a great extent deprived, and for which I think it impossible to offer an equivalent at the colleges, for the obvious reason that it is impossible to import a sufficient number of typical cases so as to prove of real practical value. I don't look with much favour on the apprenticeship scheme,

unless the R.C.V.S. insist on a higher standard of practical knowledge. Without this, it appears to me that an apprenticeship certificate would be of little value; first, the difficulty of finding an all-round practice; and second, that some members are totally unable to impart good general knowledge although good practitioners themselves. I suspect the only way out of the difficulty is to indicate that certain practical tests and knowledge will be demanded, and I don't think students would be slow in finding the requisite quarters for acquiring a store of practical knowledge. The letter recently published from the Principal Veterinary Surgeon to the Army shows a most painful want of practical training, it is therefore unfair to the public, the profession, and the students themselves that such a state of matters should exist. It is simply unkindness to pass such men, better be delayed at study and acquire the necessary training than allow them to publicly exhibit their incapacity and not only retard their own progress in early professional life, but in many instances harass and undersell their more competent and older brethren. I endorse the opinion of our respected and veteran friend, Mr. Greaves—to whom the profession owes so much, and whose opinion in such matters is of real value—when he says that young men must learn practical detail, and that it cannot be often enough repeated so that they become expert and handy when put to the test. I know from experience the truth as stated by Mr. Greaves, and not only in operations as seen every day in country practice, but also the necessity of a better knowledge in pharmacy work, which appears a very weak point with the majority of students.

The burning question at present in our ranks is the Charter, or rather, Is a new Charter necessary? and not without just cause. We unquestionably would be better for getting our existing Charters arranged and built up anew. At present they are confusing. I quite agree that in some respects the Charter of 1876 has been a failure; undoubtedly the Council should be entirely elective, otherwise it is not a representative body. The dual appointments should also be abolished. My reason for supporting this view is the limited number who are eligible for the same. With reference to the ninth clause, I do not see that the same arguments apply to it. I frankly admit that in so far as depriving the members of a seat at the Council Board was a serious mistake. Every contented and prosperous nation gives its people a voice in its deliberations, every elector in town and village must have a say in its municipal matters, and what association exists without its members having freedom of speech and action?

I do not think it fair and reasonable that the Fellows should be blamed and abused over this matter. It was not they who instituted the degree, but members of Council and the profession who were present at the General Meeting in May, 1876, when the matter was fairly and fully discussed. To refresh my memory of what took place, I looked over the VETERINARY JOURNAL, and give the following short summary:—

1st.—"At a meeting of the R.C.V.S., held on the 3rd December, 1875, draft of Supplemental Charter was read, and ordered to be printed and circulated among members of Council and Principals of Schools."—See VETERINARY JOURNAL, Volume II, page 66.

2nd.—"At a meeting of R.C.V.S., 1st May, 1876, the Supplemental Charter was fully discussed, and no dissenting voice was heard, unless one or two who thought fifteen years too long."—See VETERINARY JOURNAL, Volume II.

3rd.—"At a meeting of the R.C.V.S., 4th October, 1876, the following recommendations to Committee were agreed to: 1st. 'That they be instructed to err on the side of refusing the honour rather than diffusing it too liberally.' 2nd. 'That the candidate should be selected for his scientific attainments rather than for the extent of his practice.' 3rd. 'That not more than 100 names be submitted to the Council.' 4th. 'That no gentleman in

any pursuit other than strictly professional be brought forward for consideration of the Council.'"—VETERINARY JOURNAL, Volume III.

4th.—"At a meeting of the R.C.V.S., 20th February, 1877, seventy-seven Fellows were elected." I find after careful perusal all eminently qualified and fitted for the original honour of primary Fellows.

It will thus be seen that everything was done above-board, and clearly the profession were consenting parties to the scheme, and now that it has become law, it will be a most difficult matter to get the Charter so altered, unless the Fellows are also consenting parties. Personally, I would readily agree to restore members their just rights, also to abolish the dual appointment. I am, however, strongly convinced that every examiner must be a Fellow. Anyone occupying this responsible position is surely entitled to undergo the higher examinations. This would offer a stimulus to young members to continue the necessary study and take the degree. I think everyone must admit that this would prove a very small stumbling block in the way of an agreement, and seeing that Fellows by examination are members who have come forward under the existing Charter, conforming to its obligations, including payment of a fee, it is only right they should be consulted in any new arrangement. Another point which requires careful consideration in any new Charter is to have parliamentary or territorial arrangement of seats. Under present rules we in Scotland are really disfranchised, we have not strength to return a representative, even by combination.

The large and numerically powerful associations in England can simply do as they please. This is not as it ought to be, and must be remedied."

In the discussion that followed the reading of the paper, Principal WILLIAMS, of the New Veterinary College, expressed his cordial agreement with the President as to the advisability of trying inoculation for Pleuro, and he strongly condemned the practice of wholesale slaughter.

Mr. BOWHILL, M.R.C.V.S., Darlington, then read the following interesting paper on Swine Fever, and claimed that he had discovered the germ of Swine Fever to be identical with the germ of American Hog Cholera:—

There has been great controversy anent Swine-Plague in the United States, Dr. Salmon claiming that two Swine-pests existed; one he designates Swine-Plague and the other Hog-Cholera. He also claims the presence of two forms of micro-organismal life. Dr. Billings, on the other hand, claims the existence of but Swine-Pest (which he designates Swine-Plague), and one organism. Both of these investigators having sent cultures to the Hyginische Institute, Berlin, Dr. P. Frosch published a "Contribution to the Knowledge of American Swine-Plague" in Koch's *Zeitshrift fur Hygiene* (Vol. ix. No. 2), and after a most minute and careful study of the evidence of those observers, he concludes as follows:—

1. "Salmon's Bacterium of Hog-Cholera and that of Billing's Swine-Plague are identical. 2. The same is the cause of the American Swine-Plague, while the proof of an etiological (casual) relation of Salmon's Bacterium of Swine-Plague to the pest, especially to the existence of a second plague of like extent, has not been sufficiently demonstrated." The same author says in another place: "All these circumstances—the coeval appearance of Swine-Plague and Hog-Cholera in the same animal and the same outbreak, the presence of still other germs in the organs of the diseased animals, corresponding to the fact that mostly chronic cases are spoken of, and finally the results of the inoculation experiments, justify the assumption that Salmon's Swine-Plague Bacterium represents an accidental germ in chronic cases of Hog-Cholera, for which the independent relation and importance to a second Plague has not been sufficiently supported."

Now I claim I have isolated the true germ of English Swine-Plague; that it is identical with that of American Swine-Plague, both as regards its

morpho-biological characteristics and deportment on the various cultivating media. Further, the necroscopical phenomena in both English and American Swine-Plague are identical. Cultivations of the English germ were sent to Dr. Billings, and inoculations with same on American swine produced Swine-Plague every time. Every test was applied and control animals also made use of. The germ of English Swine-Plague, isolated and described by me, conforms to Koch's postulations, and is, as I have claimed, the true etiological moment in English Swine-Plague.—Mr. Bowhill exhibited cultivations on both agar-agar and gelatine, of both the English and American germ; also cover glass specimens from same under the microscope.

Professor WILLIAMS corroborated, having examined the specimens from which the cultures were obtained, also the culture of the American germ, and compared same with the English. Also examined same microscopically, and decided them to be one and the same organism.

Principal WILLIAMS moved a cordial vote of thanks to the retiring President and retiring Secretary, seconded by Mr. STORIE.

The Annual Dinner of the Society followed, there being present over forty members and friends. Letters of regret for absence were received from a large number of members of the profession, and friends.

After the usual loyal toasts had been proposed, Mr. HENRY THOMPSON, the retiring President, in name of the Association, presented Mr. R. Rutherford, V.S., Grove Street, with a beautiful set of silver candlesticks and table ornaments, together with a gold bracelet for Mrs. Rutherford, which had been subscribed for by the members of the Association as a tribute of respect for Mr. Rutherford. In making the presentation, Mr. Thompson said that not only had Mr. Rutherford great claims on the gratitude of the Association for the admirable service he had rendered to them as Secretary, but he had a still stronger claim on the gratitude of the country for what he had done in the way of showing stock-owners how to protect their cattle from Pleuro by means of inoculation.

In acknowledging the presentation, Mr. RUTHERFORD said that the success of inoculation as a preventive of Pleuro was a living truth, as could be attested by the dairymen around that table. The Government, under the advice of Professor Brown, had seen fit to put down inoculation in order that the pole-axe might have full swing; but with all their slaughtering, they were making no headway against the disease. He considered that inoculation of different kinds as a means of preventing diseases of different kinds would be a feature not only in the veterinary practice, but also in the medical practice of the future.

Principal WEBB, of the Aspatria College, proposed the toast of the "Teaching Schools of Great Britain." It is with feelings of very great pleasure that I rise to propose the toast, coupled with the name of one who has done so much for the advancement of veterinary science, and for the development of improved methods of teaching veterinary knowledge. I allude to Professor Williams. I may say that I have had unusual opportunities of studying and noting the various systems of teaching at the English universities, the medical schools of London, the agricultural schools of Germany, France, and Italy. I have also some slight acquaintance with the teaching in the veterinary schools of Edinburgh. During the last twenty years I can see great changes and improvements in the methods of teaching, but there is a greater change to come. Already in the best schools do we see signs of it. I mean the introduction of a system of teaching that will compel students to make observations and experiments for themselves. All training of the mind should be towards the development of the observing and reflective faculties. Some people may think it a startling assertion to make, but, in my opinion, not more than one in ten of our

teachers and professors in schools and universities adopt the right method of teaching. This results to some extent from the fact that our professors and examiners are often selected, not on account of their experience or success as *teachers*, but from the success they have gained as students. But many clever students have made very poor teachers and inefficient examiners. The chief mistake made is that of confining the teaching to facts instead of principles. Examiners are to some extent responsible for this, for teachers naturally adopt those methods which will most quickly prepare students to pass the examinations. The memory of the student is strained to the utmost with facts obtained from lectures or books, and the result is that a few months after the examination the crowded memory readily lets slip the conglomeration of theoretical knowledge so lightly obtained. The injury caused by this method of teaching results in the repression of any independent spirit of investigation, and has encouraged a slavish dependence upon authority. A student pins his faith to some particular book, or swallows without thought or examination all that is told him. I am glad to say that many teachers are beginning to recognise this danger, and their system of teaching shows that there is an attempt to encourage original observation and reflection. Among such teachers I must include Professor Williams, who has himself set his students such a good example in the way of independent investigation and thought.

In proposing the toast of the "Agricultural Interests," Mr. D. YOUNG, Irene Park, referred to the great service rendered to agriculturists by veterinary science, and to the fact that the Highland Society had for years gone on spending from £600 to £800 a year on their chemical department, while all that they could afford to spend on the encouragement of veterinary science was only £25 a year.

Mr. HUTCHESON, Dundee, whose name was coupled with the toast, said he had been on all these deputations to Mr. Chaplin on the subject of the Pleuro Order. Mr. Chaplin had a mortal bad opinion of Edinburgh, and he seemed to think it was the rottenest place under the sun so far as Pleuro was concerned, and it need not surprise them though, some day before long, the order was issued to have every cow in the city slaughtered. Mr. Chaplin wanted to immortalise his name by slaughtering out the Pleuro, but he (Mr. Hutcheson) might tell him that there was a limit to the patience of the taxpayer and a limit to the patience of the agriculturist. He had been in Australia, where inoculation was the very salvation of the herds, and there inoculated animals fetched a higher price than uninoculated animals did.

Mr. COWE, Balhousie, in proposing the health of the President—Mr. Clark—said that when a legislator of the standing of the Marquis of Huntly publicly stated that Mr. Chaplin was led into doing as he was doing through the ignorance of his advisers, it was high time that they had a Minister of Agriculture who was not so ignorant himself, nor so ready in being swayed by ignorant counsellors. Veterinary science and the veterinary surgeons of Scotland had been flouted and snubbed by the present Minister of Agriculture; but a city which produced Jenny Geddes, and a land which produced Bruce and Wallace, should produce men who could rise up and put down such an order of things. When the Highland Society sent a deputation to the Government, after they had taken the evidence of a great number of witnesses, Professor Brown said to them that the countries in which inoculation was most regularly practised were always the worst affected with Pleuro. He dared Professor Brown to attempt to prove the statement thus made. He (the speaker) thought that, considering the vast importance to agriculturists of their flocks and herds and studs being preserved in good health, the Government should in every way encourage veterinary science, instead of trying to strangle it as they were doing. And what had the High-

land Society done for the promotion and encouragement of veterinary science? They had done absolutely nothing beyond paying their veterinary adviser a miserable pittance of £25 a year to attend at their shows, while they had been throwing away vast sums of money every year on their chemical department, which had nothing to show for all the money so expended. This might be called "waspish criticism"; but he had fought the directors of the "Highland" on this subject before, and he would do it again. It was simply because the members of the veterinary profession were simpletons that they had borne so meekly with the treatment they had received from the Government and the Highland Society. They should never rest content till the Government gave handsome grants for the encouragement of veterinary science and the maintenance of large veterinary hospitals for the treatment and investigation of obscure diseases.

The vigorous speeches of Mr. Hutcheson and Mr. Cowe were received with great applause by the meeting.

A successful meeting and enjoyable dinner were brought to a close at a suitable hour. PETER MOIR, *Hon. Sec.*

SOUTHERN COUNTIES VETERINARY MEDICAL ASSOCIATION.

ON Thursday, the 26th ult., a meeting of the above Association was held at the Masonic Hall, Southampton, the President (Mr. Raymond) being in the chair. Amongst those present were Messrs. E. A. Hollingham (Hon. Sec.), Burford, F. Wragg, Duck (A.V.D.), T. B. Goodall, J. F. Simpson, J. B. Martin, J. Gould, H. King, J. Vickers, Blake, J. W. Barford, and Wheatley.

Letters were read from Professor Smith, acknowledging the honour done him in electing him an Honorary Associate; from Sir Henry Simpson, Dr. Fleming, and Messrs. Carter (Guildford) and Hood (Newport) regretting their inability to attend.

Morbid Specimens.

Several interesting specimens were then exhibited by Mr. T. B. GOODALL, as follows:—(i.) Actinomycosis of the jaw of an ox; (ii.) A case of what appeared to be osteo-porosis in the jaw of a cow; (iii.) A foal's head with the posterior nares blocked by a reflection of the mucous membrane. Interesting as showing that a horse can, on emergency, breathe through the mouth; the animal in question having done so for some hours, the obstruction being found unexpected after death; (iv.) Specimen of the bones of the foot and pastern of a horse, lame for three years, and which was supposed to have navicular disease, but was found to have an abnormal growth on the posterior part of the pastern, thus showing a disease very similar to, yet not identical with, navicular disease.

Mr. HOLLINGHAM also exhibited a specimen of intestinal calculus. The horse he had under treatment was in pain for thirty hours. There was considerable tympanitis, which was relieved by puncture. No sedatives were employed, as the nature of the case was suspected. The patient ultimately passed this calculus, and did well. Mr. Hollingham said he exhibited this specimen, because he thought it showed that there were some cases where it was not good to rush to sedatives at once, in spite of the temptation to do so, and that no law could be laid down for cases of abdominal pain.

A vote of thanks was accorded to both gentlemen, at the instance of the CHAIRMAN, for exhibiting the specimens, and

Mr. MARTIN, in seconding, said that, in the case of the ox's jaw, they would probably have ascribed the disease simply to a diseased bone, but it had been shown to be of a parasitic nature, and would help them in diagnosing such cases in future.

Election of Officers.

The CHAIRMAN proposed that Mr. Hollingham, who had fulfilled the duties

of Secretary—not always an unmitigated pleasure—so ably for seven years, should be their President.

Mr. WRAGG having seconded the proposal, which was cordially approved by the meeting,

Mr. HOLLINGHAM, in thanking the meeting for the compliment they had paid him, said he always had some diffidence in talking about himself; but he must say that whilst he had been Secretary he had found every member of the Association not only willing, but ready with active sympathy to aid in carrying out the duties pertaining to the office. The duties of Secretary were supposed to be arduous, but they dwindled down to small dimensions when one was in touch with the members. There were, however, certain duties which must be done at certain times, and on that account, considering the state of his health, he was pleased to be relieved of them. He thanked them for the honour they had done him, and felt certain that, with the assistance of old friends and new members, he would be able to justify their selection of himself for the post of President.

The CHAIRMAN, in calling upon the meeting to elect a senior Vice-President, said they must be careful in making their selection, as their new President, Mr. Hollingham, might be called upon to go abroad on account of his health. He thought, however, that should that be the case, they could guarantee that his duties would be thoroughly carried out by Mr. James Simpson, whom he had much pleasure in nominating as senior Vice-President.

Mr. BURFORD having seconded, and the Chairman ruling that the senior Vice-President be regarded as President-elect, on the ground that that had hitherto been the custom of the Association, Mr. Simpson's election was confirmed.

The other three Vice-Presidents elected for the year were Messrs. Raymond (proposed by Mr. Simpson, seconded by Mr. Goodall), Goodall (proposed by Mr. Hollingham, seconded by Mr. Simpson), and J. W. Burford (proposed by Mr. Wragg, seconded by Mr. Hollingham). The election of a Secretary was postponed till the next meeting.

On the proposal of Mr. WRAGG, seconded by Mr. MARTIN, Mr. Piesse was re-elected as Treasurer.

Mr. DUCK, A.V.D., next read a paper on Strangles, which provoked keen discussion:

STRANGLES.

Mr. PRESIDENT AND GENTLEMEN,—As a preliminary it may be of interest to know what our predecessors in veterinary knowledge thought of this disease. Their remedies are quaint and interesting.

I will commence with a quotation from Mr. M. Gibson, date 1735. I am sorry that our Library at Woolwich contains no older authorities.

Anno Domini 1735. *The Farriers' New Guide. Eighth Edition, by M. Gibson.*

The writer says that Strangles "seems not to differ much from the Quinsey," but he also states the Sieur de Solleysell compares it to the Small-Pox, from the fact that young horses are most liable to this distemper, and that few horses are troubled with it above once, "unless the matter of the Strangles has been imperfectly cast off, when it generally returns about the age of six, ten or twelve."

Further on Mr. Gibson remarks "sometimes the Strangles are cast off chiefly by the nose, and sometimes they break inwardly about the roots of the tongue, and when that happens most of the matter issues from the nose also."

"Strangles," from a treatise of Farriery, by John Wood, late Groom to the King of Sardinia, and at present Groom to the Right Hon. the Earl of Rockford. Date 1757.

"The Strangles and Vives being disorders sufficiently known, I shall be as concise as possible."

He recommends a diet of bran, veits or barley, for the changing of the food will prevent its pulling the stomach. "In cases of costiveness let a clyster be administered between whiles."

He says, "I should not advise bleeding, unless the fever runs high, and the swelling threatens a suffocation." As soon as the swelling becomes soft to the touch he directs it to be opened and dressed with digestive ointment "in order to promote a favourable digestion of the matter forming underneath, and to prevent any hardness accruing which might otherwise supervene."

"Sometimes this disease is attended with a running at the nose, which, if of any long continuance, may bring on the Glanders." To prevent this he recommends the following:—

"Take oak bark, shavings of hartshorn, and guaicum wood, of each half a pound, two handfuls of shepherd's purse, roots of snakeweed and tormentils, of each a quarter of a pound. Boil these ingredients in six quarts of lime water, to the consumption of a third part, then strain off the remainder. Give a pint morning and evening."

He continues, "The Vives only differ from Strangles insomuch as they seldom or never arrive at such a pitch as to form a suppurative matter, but go off gradually by perspiration, and the application of hot goose grease or of ointment of marsh mellows, and warm clothing.

In the preface to his book, Mr. Wood points out "the absurdity and even mischievous consequences of exhibiting purges, and these frequently very strong, on occasions that imply no such necessity."

"The complete Farrier and British Sportsman," by Richard Lawrence, V.S. Date 1816.

Defines Strangles to be a critical disease by which something obnoxious to the constitution is thrown off, and when it goes through its regular course, the general health is improved.

He considers it to be the first disease of the horse, frequently occurring in colts at grass, occasionally with a fatal termination. In some cases as a last resource to prevent suffocation, he recommends the operation of bronchotomy, or cutting out a piece of the windpipe about the size of a shilling, through which aperture the horse can breathe with ease and safety. He mentions that this operation has been frequently performed by Mr. Field of Oxford Street, with the greatest success, but he says nothing of a tracheotomy tube.

Treatment: If the colt is strong and full of flesh, he deems it advisable to moderate the inflammation by taking about two quarts of blood, and by giving a gentle purge, as—

Aloes Barbadoes	3 drachms.	
Castile Soap	4 „	
Ginger	½ „	In a ball.

Externally, he applies warm fomentations, with a decoction of marsh mallows and bran poultices.

At the close of the Strangles, provided the horse be not very weak, he gives the following purge:—

Aloes Barbadoes	4 drachms.	
Tartar emetic	½ „	
Castile Soap	2 „	
Ginger	1 „	In a ball.

The author states that French and other foreign writers have compared it to the Small-Pox in man.

And further on he states, "About twenty years ago (*i.e.*, in 1796) a farrier at Birmingham introduced the practice of inoculating colts with strangles, and it is said, with success, although the practice does not appear to have extended to any other part of the Kingdom."

This farrier was evidently a shrewd, observing man, and in advance of his time. And this leads to the question, was Mr. R. Lawrence, V.S., of 1816, in advance of the older farriers of 1735 and 1757 previously quoted?

Anno Domini 1826. "*The Outlines of the Veterinary Art*," *By Delahene Blaine, Third Edition.*

Mr. Blaine states: "It is truly remarkable how very contrary the opinions of almost all the writers on this subject have been, and how lamentably ignorant they appear in their description of it. Mr. Prosser, although he wrote a treatise professedly on the Strangles and fevers of horses, in which he introduced some excellent critiques on other writers, yet left both subjects entirely where he found them. Gibson supposed the complaint resembled Small-Pox; Beach, the Quinsey; others, the Hooping-cough, Measles, Small-Pox, Chicken-Pox, etc. All which suppositions originated in a want of attention to the animal economy in general, and to the disease in particular; for it bears no more resemblance to either of these than as it attacks horses about the adult period, and as it appears only once. In other respects it may be characterized as a catarrhal affection, accompanied with a specific phlegmonous inflammation of the cellular substance in and around the parotid and submaxillary glands, tending in most instances to abscess. La Fosse divides it into mild or malignant, and false or bastard Strangles; but these definitions do not appear to be well founded, for though there are cases in which the symptoms are milder than others, it does not appear that any specific virus is ever left, by which future depositions are formed, called 'vives.' There is no reason to suppose the Strangles infectious, though it has been said to have been given by inoculation."

It is an eruptive febrile disease of a specific infectious nature, affecting the equine species.

Definition of Strangles:—Marked in ordinary cases by the formation of abscesses in the connective tissue of the gland structures between the jaws. Of its specific infectious nature I will give an instance later on.

So far as I know the disease is confined to the equine species, and for a long number of years has been known as Strangles. It principally affects young horses up to the time when dentition is complete, and is seen amongst colts at grass. It is said that one attack gives immunity to an animal, also that after recovery from the disease there is a marked increase in functional activity, *i.e.*, the animal puts on flesh and thrives rapidly.

Dr. Fleming in his concluding remarks on "Variolous Diseases" states:—"Professor Trasbot believes that Strangles in the horse is Horse-Pox. You will find very frequently indeed that horses affected with what were supposed to be Strangles have an eruption about the mouth, and the eruption running round the cheeks. I am inclined myself to believe that it is a form of Horse-Pox."

Again, some writers assert it is catarrhal, others compare it to Scrofula, etc.

My own opinion is that Strangles is a disease "*sui generis*," quite distinct from Scrofula, Horse-Pox, etc., and that of itself it cannot terminate in Glanders.

Causation.—From the fact of Strangles almost entirely affecting young horses, I cannot help thinking it must be connected with dentition. Also

that animals are more susceptible when brought up from grass, and stabled; or after purchase at fairs and brought into town stables. There is a change of diet, a warmer and closer atmosphere, and probably the animal is further depressed by a railway journey and a slight cold, producing a state of system favourable for the reception of the exciting cause.

Symptoms.—I do not propose going into the symptoms of ordinary cases, it would only be a waste of time, as you are all well acquainted with them. I look upon those cases in which the abcesses form in the region of the parotid glands as serious, from the fact that there is often left tumefaction, which, pressing upon the larynx, is likely to result in Roaring. Again, in those cases of multiple abcesses, affecting the head, neck, the perineal and inguinal regions, etc., there is much more constitutional disturbance, the abscesses are sometimes very large, and the drain on the system very severe. Often the patient loses flesh so as almost to look a skeleton, recovery is protracted, slow, and uncertain, often resulting in Roaring. The most serious cases of all being those in which the mesenteric glands are affected.

From June 1st, 1888, to May 31st, 1890, I had veterinary charge of the Remount Yard at Woolwich. During this time 128 cases were treated, of these two died. Probably a brief account of these two cases may be more illustrative than discussive talking.

April 19th, 1890.—Adenitis.—Case went on as usual up to 30th inst., two abscesses having been opened in sub-maxilliary space.

May 5th.—Hard swelling low down the neck.

May 6th.—Swelling more diffused, hard, painful, extending from ear to ear, filling up the space between the jaws, and extending half way down the neck. Very severe constitutional symptoms, respiration very laboured; temp. 102·3. 5 p.m., performed tracheotomy.

May 7th.—Breathing much easier, tube removed, feeding, etc.

May 8th and *9th.*—Pulse 42; temp. 101·1; doing well.

May 10th.—Much worn, reinserted tube-pulse intermittent; temp. 101.

May 11th and *12th.*—Not doing well; unsatisfactory. Swelling very tense, and extremely painful.

May 13th.—Abscess pointing on near side about five inches below the angle of the jaw, opened, giving exit to a quantity of most offensive pus mixed with food; temp. 104. The horse was tried with water, which poured out in a large stream through the external opening. Patient very weak and exhausted.

May 14th.—Died at 10 p.m.

Post-mortem.—There was a large irregularly shaped opening in upper part of œsophagus, communicating with the abscess cavity.

N.B.—If I had had resort, at the proper time, to an exploring needle, I might have saved this case by giving an external exit. The difficulty was to fix a point.

Aug 15th, 1889.—Army No. 16,827.

Strangles.—At first appeared to be an ordinary case; the abscess matured, was opened, and the mare doing well.

Sept. 3rd.—Very ill indeed, a little discharge from abscess, apparently of a healthy nature; pulse 66; temp. 102. Pyæmia. No improvement took place, the pulse rose to 72, 84, 90; temp. up to 102·3 and 104.

Sept 16th.—Died at 10 p.m.

Post-mortem.—On opening the abdominal cavity the man cut deeply, giving exit to a large amount of pus, and when the skin and abdominal muscles were laid back, then appeared a huge mass of mesenteric abscesses.

With regard to these cases there is a point I wish to bring to your notice. It is generally believed that if the abscess or abscesses mature properly that the case will terminate favourably. In both these instances, the primary

abscesses matured well, and the animals apparently were doing well for some time.

Following on the last case I should like to quote another:—

Dec. 1st, 1888.—Adenitis.—Serious constitutional disturbance, not feeding, legs swollen, thickening in submaxillary space.

Dec. 10th.—Abscess forming in perineal region, submaxillary space clear.

Dec. 14th.—Abscess opened, large quantity of pus, great relief to patient.

Dec. 28th.—A third abscess forming near anus, constitutional symptoms more severe, legs and joints much swollen, animal can scarcely move the feet off the ground.

Dec. 30th.—Abscess opened. As before, great relief afforded, swellings disappearing, animal commencing to feed.

Jan. 8th.—A fourth abscess opened, discharge profuse and healthy, with great relief to constitution.

Jan. 10th.—There were symptoms of colicky pains, but not very acute. These continued from 7 a.m. to 11 p.m. when the patient became perfectly quiet, commencing to feed.

Jan. 12th.—Noticed a distinct patch of laudable pus in one of the droppings, I did not see the fæces voided, and it might have dropped from the fourth abscess, but at the time we did not think so.

Jan. 30th.—Another exceedingly large abscess burst in the left inguinal region, preceded by the constitutional disturbance. By this time the animal had become weak and thin, but steady recovery set in, and the patient was discharged, cured, on Feb. 18th.

N.B.—In this case, What was the cause of the colic? I am inclined to think a mesenteric abscess, that discharged itself in a favourable situation.

In another case, the details of which I will not inflict upon you, there were twenty-six external abscesses about the throat, ears, and muzzle, also two that burst inside the mouth.

In connection with above case it happened that four horses with Strangles were placed in a block of boxes, in which the dividing walls were not quite complete; a space had been left in the upper part for the better ventilation. The horse in the third box first displayed unusual symptoms, a large number of abscesses forming about the head; soon the horse in the fourth box became affected in a similar way, then the horse in the second box, and lastly the case mentioned above in the first box. All recovered from Strangles, but two were found to have become roarers.

In all these four cases there was swelling of the head and muzzle, which was studded with abscesses, varying in size from a cherry to a large plum, they were left alone, and all burst. Professor Trasbot would probably have considered them to be cases of Horse-Pox. I could not see any resemblance; there was scarcely any constitutional disturbance.

With regard to these cases the greatest care was taken that no contagion was conveyed from one animal to another by the attendants, the infecting material must have been carried through the open air-spaces between the boxes.

In yet another case a mare, in very good condition, the primary abscesses matured well, but were followed by others, and very large ones, chiefly in the perineal and inguinal region. The mare became reduced to a skeleton, recovery was very slow, and she became a rank roarer.

Treatment: Acting upon the supposition that this is a specific eruptive disease, it would be injudicious to check the due formation of abscesses. To use the homely expression of Richard Lawrence, V.S., date 1816, "There is something obnoxious to the system to be thrown off." It is evidently our object not to check but to foster the formation of the abscess, to get it over quickly and thoroughly, to get as complete resolution as possible, because

permanently enlarged glands are a serious inconvenience. Fomentations and poultices are recommended by many. I have a strong objection to them for the reason of the difficulty of their being properly carried out. Poultices to be of any good must be large and well applied, their own weight, pendulous position, and the movements of the jaws all tend to displacement. To foment the jaws properly is tiring work, and in bad poulticing and fomenting there is the danger of a current of air acting upon a wet surface, producing evaporation, thus reducing the temperature.

To keep the part affected of an equable temperature I use a night-cap made out of old grey blanketing, and tied close up to the ear on the near side, thus enveloping the throat. When the head collar is put on, the throat strap keeps this well in position. I have fancied good results in cold or changeable weather. According to the case external applications from ordinary liniment to a smart blister are useful. A good loose box is a great desideratum, one in which there is an outlet at the upper part, allowing of a regular flow of air to carry away disease germs, and thus ensuring pure breathing atmosphere. Careful and generous dieting, and the keeping up of the body warmth by rugs and bandages are very necessary.

Some prefer that the abscess be allowed to burst, I advocate the knife, you get a clean cut wound, and little subsequent blemish. When the pus has been evacuated I apply a large pad of wool wadding, and in the keeping of this pad in position the night-cap is of great use. Undue after interference is prejudicial, by this I refer to the ramming in of the not over-clean fingers of grooms, etc., to keep the wound open. In an ordinary case very little more is required, and the affected part heals steadily and quickly.

When the night-cap is not further required it is destroyed, never used a second time; it is very cheap. The advantages of using a night-cap are, that especially in cold and changeable weather it keeps up the temperature of the part affected, and prevents surface chills; it also facilitates the application of subsequent antiseptic dressings.

As to the time for opening the abscess, we must be guided by circumstances. Only a few days ago I saw a case in which alarming symptoms of suffocation ensued from an abscess breaking inwardly, these symptoms were quickly relieved by opening the abscess externally, and by the application of fomentations. I have also previously quoted a case in which the animal's life might have been saved by an early operation. I consider, too, that time is often saved, therefore gained, by a judicious early operation.

Administration of Medicines.

Internal remedies in this disease I avoid as much as possible; by dieting I endeavour to keep the bowels acting regularly, and by various changes in the food tempt a fickle appetite. I do not advocate a lowering mash diet, quite the contrary. Very often it happens that a day or so before the abscess is ripe for opening, the patient is feverish—not feeding. Do not interfere, have a little patience, keep up the surface warmth of the body by rags and bandages, be careful as to the diet, and do not by injudicious remedies alter the course of the disease.

In infantile disease, good nursing is half the battle.

Tracheotomy.—There is a difference of opinion as to when this operation should be performed. In cases of Dyspnœa I always fear imperfect aeration of the blood and increase of febrile symptoms, therefore do not like hesitating long about the operation. As much as possible antiseptic precautions are observed, cleanliness of the animal's skin, of the knife, hands, etc., cutting through three to four rings of the trachea, the tube not to be kept in longer than necessary. During the last two years I have operated four times; in one case the abscess burst into the œsophagus and the patient died, the other

three cases did well, I galloped them after recovery and found no untoward symptoms; nothing like the "curling" in of the rings or stricture.

From these cases, I am inclined to believe that the fear of permanent bad results, such as Roaring from stricture, is rather exaggerated.

In performing this operation, it often happens that we have to work under awkward circumstances. I advocate cutting through the tracheal rings, as I think you can watch the healing process, and obviate any curling in of the cartilages.

Results.—During my time at the Army Remount Yard, 128 cases were treated, two died. I now wish to call your attention to another most serious result, and that is Roaring.

From January 1st, 1889, to December 31st, 1889, a complete year, I made careful notes of all cases. Of sixty-three cases treated during that year one died, three became roarers. Of those three, one was delivered at the yard subject to examination, but arrived so ill that he was at once placed on the sick list, and on recovery was found to be a roarer; so that I am not prepared to say the animal was sound in wind previous to the attack, but I think he was. I tested, by galloping, these horses myself, with the object of collecting reliable information.

There is one point that I have often thought about, do roarers from Strangles ever recover? At the Remount Yard, the horses as soon as fit were issued to all parts, passing from my observation, and consequently I have not been able to satisfy myself.

I do not see why, after a time, in some cases as the animal gets in better condition, the nerves and muscles affected should not participate in the general improvement and the larynx assume its normal state.

Probably the following statistics about Roaring may be of interest.

Remount Yard, 1889. From 1st Jan. to 31st Dec.

Average age of those admitted into hospital: 3 years 11 months, just under 4 years.

Average number of days under treatment, 29.

Again, with regard to these eight Roarers, three occurred in February, two in April, one in May, one in October, and one in September. From this it would appear that the early part of the year is the most unfavourable.

Of twenty-one cases of chest affection that recovered, nine terminated in Roaring.

Nature of Disease.	No. of which became Roarers.	Proportion per cent. of Roarers.
Strangles.....	3	4·34
Catarrhal and Laryngeal Affections.....	5	2·38

Concluding these remarks, gentlemen, I would hazard a statement that this disease is of a far more serious nature than many think. A few cases die, others are permanently depreciated in value from Roaring, whilst in all there is waste of condition and loss of working tissue.

The question also arises. Have we advanced in our knowledge and treatment of Strangles, since the Birmingham Farrier of 1796 advocated inoculation as a preventive measure? The study of bacteriology was then never dreamed of. But I think I am right in stating that Mr. Raymond has devoted time and attention in this line of research, and I trust he will give us the benefit of his advanced knowledge.

SOUTH DURHAM AND NORTH YORKSHIRE VETERINARY MEDICAL ASSOCIATION.

A MEETING of this Association was held on March 6, 1891, at the North Eastern Hotel, Darlington, Mr. G. T. Pickering, the President, in the chair. There were also present Messrs. J. E. Peele, G. E. Nash, P. Snaith, T. Bowhill, W. E. Lawrence, A. Peele, W. T. Briggs, and W. Awde, Hon. Secretary.

Apologies for non-attendance were received from Messrs. F. R. Stevens, Darlington; John Fryer, Kirkby Fleetham; and John Nettleton, Northallerton.

The SECRETARY reported that the Joint Committee had decided that the members of the South Durham and North Yorkshire Association should visit the Annual Meeting in Newcastle-on-Tyne in February, on the understanding that the North of England members visited the Annual Meeting at Darlington in September, and that in response to the circulars sent out seven members had attended the meeting in question.

Mr. W. A. Hancock, M.R.C.V.S., Newcastle-on-Tyne, was nominated for membership.

Mr. H. H. Roberts, M.R.C.V.S., Coundon, was unanimously elected a member, and Professors Axe, Walley, Williams, and Mr. Thomas Greaves were elected Honorary Associates.

A letter was read from Mr. Atkinson, of Masham, tendering his resignation, but it was unanimously resolved to ask him to reconsider the matter.

Several interesting cases were brought forward, after which the following paper was read by Mr. G. E. Nash, the discussion on which was adjourned till next meeting:—

SOME DISEASES MET WITH IN THE COW DURING THE FIRST MONTH SUCCEEDING PARTURITION.

Mr. CHAIRMAN AND GENTLEMEN,—Our Secretary having asked me to read a paper before you this evening, I consented providing no other member of the Society could be prevailed on to do so. It was with considerable diffidence that I accepted the responsibility, for I am sure there are other members far more capable of writing a paper than myself, but I consider it the duty of any member to produce matter for discussion for our meetings when requested to do so by the Secretary. I am sorry to say that owing to my time having been pretty fully occupied this last month, I have only been able to prepare a very crude paper, in fact the subject of my paper was chosen by me simply as one likely to lead to a good discussion; we have any amount of papers on equine matters, but the poor cow has to take a back seat. I am aware that I have nothing new to bring before your notice, but you will admit that the diseases I shall mention are of great importance both to us as country practitioners and to the farmer. During the next three months we shall be in the midst of the calving season, and shall doubtless have to cope with all the diseases I shall touch upon; and if my paper is the means, through the discussion which I hope will follow its reading, of our getting a few hints how to treat successfully any or all of these diseases, I shall feel that my efforts have been highly rewarded. I am not going to say anything about the act of parturition, but simply to note the most common ills that follow that event, and the first we are likely to meet with, occurring as it generally does immediately after delivery, is

Hæmorrhage.—This may be vaginal or uterine, venous or arterial. I do not think we shall have much difficulty in arresting it, either from the vagina or uterus, unless the bleeding is in such quantity as to amount to actual flooding, and then we have a very grave lesion to deal with, in fact, my own experience of it is to arrive on the scene just as the cow is breathing her last, or shortly after her death. I am sorry to say that, owing to its having happened at a busy time, I have not had an opportunity of making a *post-*

mortem examination in these cases, and so I cannot speak with any confidence as to the exact cause or locality of the hæmorrhage, but the most common causes are the giving way of a large vessel through the heavy paining of the cow during the expulsion of the fœtus, the too-forcible removal of the placenta, and tearing of the uterus or vagina by forcible removal of the calf in an unnatural position. The last case I had was a heifer, she calved with very little help, the calf being in the normal position, and the fœtal membranes followed the calf; she commenced to bleed soon after, and died within the hour. This beast was very fat when she calved, which I have no doubt was the predisposing, if not the actual, cause of the hæmorrhage.

The treatment I adopt—and I may say that I do not interfere unless I see that the bleeding is not going to stop spontaneously, which it generally does, in my experience—is to inject a weak solution of perchloride of iron. This I have generally found effectual, but when it does not arrest the hæmorrhage, I think injections of hot water would be worth a trial. Sub-cutaneous injections of ergotine would, I think, be likely to have a good effect, but I have not had any occasion to try it. I see that brandy is recommended, in human practice, in severe cases of hæmorrhage; I should have thought that stimulants would be likely to do harm by increasing the circulation, but I suppose in cases of extreme weakness it is found to be beneficial. The drugs I have generally used are tannic acid, tinct. opii, ol. tereb., ac. sulph. arom., and tinct. ferri perchlor., but in severe cases they do not act quick enough.

Post-partum Paining.—About this I have not much to say, but it is often very troublesome to treat. It generally results from difficult parturition; sometimes from too forcible removal of the placenta, but in some cases I can trace no appreciable cause. The treatment is obviously by anodynes; the best in my opinion being opium, morphia, chloroform, and chloral hydrate; the morphia administered hypodermically. Injections into the uterus of tinct. opii et chloroform I have found to do as much good as anything. I have also tried the vapour of anæsthectic æther with good results. Tracheotomy has been recommended to lessen the pain from whatever cause, but I should not be inclined to try this operation unless all other means had failed. Packing the hind quarters as high as possible helps to lessen the pains. One thing I am always careful to do, and that is put a truss on—or if you have not one with you, make one with a cart-rope, or you may have to deal with a much graver affair.

Eversion of the Uterus, and if this does take place you will heartily wish you had taken the simple precaution I have mentioned. The causes of this accident are, paining during, or rather after, the expulsion of the fœtus, from relaxation or rupture of the ligaments of the uterus. A cow that has had eversion of the uterus once is very liable to it a second time, particularly in the case of a difficult delivery, or if the placenta does not come away at once, and it is liable to occur in a cow that everts her vagina some time before calving, unless she is closely watched. I have seen cows evert their wombs, and a rupture of the vagina into the bargain, even after the precaution of putting a truss on, but this has been due to neglect, the cow having been left whilst the pains were on her, and perhaps when she laid down the truss had got twisted. The treatment I should advise in every case of inversion of the uterus is, of course, to return it *if you can*. It sounds very well, and looks very easy in writing, but as you all know—or if you don't you ought to—it means a lot of hard and very dirty work. If you are on the scene of action soon after the uterus has been expelled, it will not be such a difficult matter to return it, but we generally have to deal with a swollen, dirty, and sometimes lacerated organ—an immense bleeding mass hanging down to the hocks—it makes you wish you had it nicely back into its normal position, and were on your road home again. (*To be continued.*)

BORDER COUNTIES VETERINARY MEDICAL ASSOCIATION.

A MEETING of the members of this Association was held in the Bush Hotel, Carlisle, on the 13th of February, and was followed by the annual dinner. The members present were: Mr. Bell, Carlisle (who took the chair at the commencement of the proceedings); Professor Williams; Messrs. Rutherford, Edinburgh; Jacob Howe, Keswick; Carlisle, Carlisle; Pears; Armstrong (secretary), Penrith; Donald, McIntosh, Thompson, Troughear, Jacob Dawson, Bell, Tucker, Potts, Little, Ward, and T. Anderson.

Several letters of apology for absence were read, including one from the late President, Mr. Greaves.

Mr. Jacob Howe, the newly-elected President, then took the chair, amid applause. He expressed his deep thanks for the honour which had been done him—an honour he would never forget.

Mr. Rimmer, of Kendal, was elected a member of the Society, on the motion of Mr. Armstrong, seconded by Mr. Bell. Mr. Bell proposed that Dr. Fleming be elected an honorary member. Mr. Donald seconded the motion, which was unanimously agreed to. Mr. Donald nominated two visitors at the meeting, Mr. Potts, of Dalston, and Mr. Ward, of Workington, for election as members at next meeting.

Mr. DONALD then, in accordance with notice, moved the following resolutions.—1. "That this Society disapproves of members of the Council holding the dual office of Councilmen and Examiners;" 2. "That this Society disapproves of the 9th clause, and request the Council of the R.C.V.S. to take immediate steps to obtain its repeal or alteration, so as to restore to members of the R.C.V.S. their original rights." With regard to the second resolution, he said the rights of members were taken from them unjustly, and ought to be restored. As to the first, his principal reason was that members of the Council who remained Examiners had no check upon their conduct at the examining board; also, they were self-elected, which was contrary to the constitution of any well-governed body.

Mr. MCINTOSH seconded both resolutions. He was of opinion that a man could not be servant and man at the same time. It was but right, he said, that examiners should be free from the governing body, so that the body which appointed might be able to look into any failings which might be reported. With regard to the second resolution, he held emphatically that the 9th clause ought to be abolished. As an old student of the Clyde Street College, and a graduate under the Highland Society's diploma, he was one of those appealed to put down his name to get quit of the old Highland Society examination; and he did so, thinking it would be the means of benefiting all parties, by getting quit of what created two different bodies in the profession. He found himself in a worse position than ever. As a member of the Royal College of Veterinary Surgeons, he was entitled to sit on the Council, but the 9th clause deprived him of the right he possessed—it took away his privileges without consulting him.

Mr. RUTHERFORD said that what Mr. McIntosh complained of was a great illegality—and so it would be decided if the matter was put before competent judges. He contended that the rights given by charter could not be taken away. The charter of 1876 did take away those rights, or attempted to do so, and he was in favour of them being restored to all veterinarians prior to 1876. His vote and interest had always been in that direction. The members of the profession who acted under the diploma of the Highland Society were in an invidious position. It was a positive fact—he had the word of Mr. McIntosh—that he did not know at the time arrangements were made with the Royal College that this proposal was actually in existence. He (Mr. Rutherford) said Mr. McIntosh was to blame, and the Highland Society directors were notoriously to blame. Yet this arrangement was made

in 1879, that after a certain time all must become Fellows who wished to possess the privileges of the Royal College. The Highland Society men, in his opinion, were as much entitled to all the privileges of the profession as were those who became members of the Royal College by diploma; and he would use his best endeavours in obtaining this for them. But the young men who passed after 1876 had years and years of warning. Notice was given to them, and they had no legal right to expect that they could have the same privileges. It would be a retrograde step, and it would certainly be opposed by Parliament, to "restore" a privilege to gentlemen who never had it. With regard to the dual appointment, it was a very narrow proposal. In excluding men who were good business men they would be making a great mistake. It so happened that they were good men who were selected for the Council, and it was very fit that they should be appointed examiners. They were not all examiners in the Royal College, and in carrying a proposal of this sort they would be casting something like a slur upon the Board of Examiners. What harm had they ever done? Did they ever fail in their duty? The question never arose until the disturbances in Edinburgh. The examiners were not to blame, and they saw in the Royal College the only medium they had for every inquiry. He was against the eradication of the dual appointment; he saw no harm in it, and he had had some experience in the working of the clause.

Mr. BELL said he looked upon the 9th clause as severing from him a right that nobody had a right to take from him. He complained of its retrospective character, and said he was as strong as anybody could be in having that clause repealed. It was a mistake, he added, to cavil too much about the examiners. He did not approve altogether of the manner in which the Council had been appointed. Societies like this, he thought, had opened the eyes of the profession, and they would see that they got good men.

Professor WILLIAMS said he was glad to see the Society come round to his way of thinking, that this 9th clause should never have existed. Before the Charter was obtained he laid it down that was a right they had got, which could not be legally taken away. He went further than Mr. Rutherford did, and maintained that instead of depriving of those rights young men who entered the profession after 1876, there should be no reservation; and that every man, whenever he became a member of the profession, had a right to all its privileges and had a right to be on the Council. With regard to the dual appointment, he did not think they should take any action.

The PRESIDENT said if a man had done well on the Council, he would not stop him rising. If he could make himself good enough for an examiner, let him be one.

Mr. DONALD: All that we want is that he should retire from the Council.

Mr. RUTHERFORD: It is of the utmost importance, sometimes, that examiners should be on the Council.

Mr. DONALD briefly replied on the discussion. It was assumed, he said, that all the knowledge the profession possessed was on the Council. It appeared to him that certain examiners made a profit out of the position.

The resolutions were then put, when the first, relating to the dual appointment, was lost by the casting vote of the chairman, their being five for and five against. The second motion was carried unanimously.

The following paper was then read by Mr. JACOB HOWE:—

NOTES ON REARING OF CALVES.

GENTLEMEN,—With your permission I will take your minds back twelve or fifteen years, to the then custom of the farmers in my district of rearing their calves. As soon as born they were taken from the dam and put into

any place handy, and very often into places unsuited to an animal so young, often cold, damp, and draughty.

The custom at that time was with all farmers, as far as I know or remember, to feed the calves only twice a day, and therein lies a great mistake, I think a very great one, indeed the chief cause of their trouble afterwards. It is far too long for so young an animal to be without its natural nutriment, and as one result too much milk is given at one time, and then we get those large, heavy masses of a spongy-texture formed in the stomach. Two, and sometimes three of these are found after death, and I am sure these undigested masses are the chief cause of Diarrhœa; their action—as foreign bodies—bringing on irritation, to be followed by inflammation of the stomach and the intestines. From the efforts of nature to relieve herself, we get an increase of gastric fluid, and that is the true cause of purging, loss of appetite, and, unless relieved, exhaustion and death.

Symptoms.—The chief symptoms are impairment, and sometimes total loss, of appetite. Calf spread out, or huddled up in some corner, purging, ears and legs cold, quick and weak pulse, short and catching breathing, occasional grunt.

Treatment.—Castor and linseed oils, rhubarb, etc., etc., give not altogether satisfactory results, although no doubt they do good in some of the milder cases; and I have seen cases do better with laudanum and arom. spt. ammonia in cold water; but I must confess that I never had as good results with any of them as with the following powder:—

According to age. Two to three drachms nitrate of potass, and equal quantity of sub. carbonate of soda, and double the quantity of salts, in some carminative—a little gentian or ginger—given in some warm milk. Many a time have I seen the greatest benefit from only one powder; indeed, often there is no need to give a second powder.

I always order the calves to be fed at least three times a day, but I prefer four, and not to give too much at one time, the quantity, of course, to depend upon the age of the calf; say you commence with *a gill* of new milk, to a quart, and so on, according to the size and strength of the calf.

Prevention.—Should the weather be cold, I would have no objections to put two or three calves in one division, because there is a better chance to keep each other warm (especially now that the calves are born much earlier in the spring than they used to be). I should keep them so, providing all were well, until they commenced sucking each other, which I consider does the calves harm. Then I should cut my space up into more divisions, and let each calf have his own box, as it were, taking care to have hurdles or rails put so close that the calves could not get more than the nose through; for they are often shoving the head against the rails, and trying to get it through at feeding-time, and by continually doing so they cast the young horn in a lateral or backward direction, which spoils their natural appearance, and reduces their value to some extent when they are fully grown.

Before concluding these few remarks, I should just like to mention two other forms of disease we not unfrequently meet with. They are Bronchial Affection and a very nasty form of Sore Throat.

Bronchitis.—Here we have hurried breathing, and a husky, rattling sort of a cough; and the appetite may be fairly good. After ascertaining the state of stomach and intestines, I try by all means to keep up the strength of the animal. Apply hot water to the sides for fifteen or twenty minutes, then get some woollen clothing and sew it on to the sides and chest; in fact, it is a good plan to wrap the calf up in a blanket, or large-sized rug, legs and all except the nose. I don't like giving much medicine, but I don't think there is any harm in giving a little spirit in milk or water, and trying the patient at short intervals with a little milk. I generally give one powder to correct the stomach.

Throat Affection.—In this there is great difficulty in breathing, sometimes to a very alarming extent, throat swollen externally and internally, skin thick to the feel, and a thick, tough, slimy matter accumulated at the back part of mouth and top part of throat, which I try to get up, and the best way I can find is a little common salt with a little powdered ginger, put to the back part of the mouth as a dry powder, with a good-sized spoon. Externally I apply hot water, or a poultice tied on hot; sometimes I put in a seton, and I have known tracheotomy performed with good results.

All our cases require perseverance and attention—none are too insignificant. It is just as necessary to pay attention to the rearing of calves as to any other branch of our profession, if we intend to be successful with our treatment.

Discussion.

Professor WILLIAMS said he was glad to hear the President on this subject. It reminded him that all young animals ought to be fed very frequently. In Wales foals were often separated from the mares for hours together. The mare was taken away in the morning, ploughed to the middle of the day, when the foal was allowed to suck her, then went out again. The young animal was half-starved during the day, and nearly burst itself when it had the opportunity; this caused great mortality among the foals. It was something similar that caused Jaundice in young dogs. Keepers said they only fed them once a day. An immense dose of food overcrowded the stomach, and the rapid digestion led to Jaundice, which killed in two or three days. This could be prevented simply by frequent feeding.

Mr. MCINTOSH said he had to deal very much with young calves in the spring season, more especially calves bought at a distance and brought into the district, which had been a long time without food and were then gorged with milk. It would be the saving of a large percentage of stock if farmers would only feed their young animals frequently. The price of young calves was high, and many died—as far as 40 per cent. of imported calves—simply from repeated gorging after fasts. Small doses of Dr. Gregory's mixture is one of the best things for young calves while having White Scour from milk. A half-ounce dose, given in a little milk, and repeated a second time, unless the case is a very bad one, frequently relieves the stomach and bowels, and is an antacid which helped and assisted them. He had given it hundreds of times with success.

Mr. PEARS said this was one of the chief things country veterinarians had to deal with—calves from a distance. He had known the disease come on very rapidly, and it was very difficult to manage. If it lasted two or three days there was a chance of coping with it, but generally it came on so suddenly that it beat them altogether.

Mr. LITTLE said a difficulty existed in getting farmers to come to veterinary surgeons; they thought they could cure the disease themselves. The prescription given by the President would act very well in certain cases, where farmers did not come forward for perhaps two days or so. But when there was acute inflammation, that medicine would be improper treatment, and would kill the animal. So in these cases, he thought, inquiry should be made how long the animal had been ill, and it should be given, not a small dose of laudanum or pain-killer, but a big one.

Mr. CARLISLE, who was received with applause, said this was one of the most important subjects the Association had discussed for a long time. The matter was of such importance that he would recommend the adjournment of the discussion to another meeting. They must arrive at the very cause of the disease. There was a lot to contend with in the rearing of calves, and it was a matter well worth thrashing out. On many occasions a calf is quite healthy and jumping about one day, but is lying dead next morning. The first

symptoms were: the animal became prostrate, and there was heaving at the chest; very likely the day previous there had been a little disturbance in the bowels, and there might be streaks of blood observable. There was something more than the milk to account for calves dying so quickly. No doubt the milk had a great deal to do with it. It might not be properly secreted. We did not often see a calf die that had its proper mother's milk; these got through much more easily than calves taken away from their mothers and fed on different kinds of milk. It was better for a calf to get its mother's milk until it was a fortnight or three weeks' old, and a small quantity of chlorate of potass dropped in amongst it would do good.

Mr. BELL said the subject ought not to be passed over lightly. There were many who knew that the system of feeding dairy cattle had much to do with the question of loss of offspring. When he said that in some portions of the country there was a loss of 75 per cent. of calves, it would be understood that the subject was of great importance, and was worthy of being continued at another meeting.

It was agreed that the discussion should be resumed at another meeting.

A paper on "The Castration of Rigs," by Mr. Donald, was deferred.

The members dined together after the meeting, and a very enjoyable evening was spent.

JOHN ARMSTRONG, *Hon. Sec.*

THE VETERINARY ASSOCIATION OF MANITOBA.

THE second annual meeting of the Veterinary Association of Manitoba was held in the Municipal Chambers, Winnipeg, on February 11th, 1891. President Dunbar occupied the chair. Present: Messrs. Little and Baker, Winnipeg; Young, Maniton; Torrance and Fisher, Brandon; Henderson and McMillan, Carberry; McNaught, Rapid City; Little, Pilot Mound; Morrison, Glenborough; and the secretary, Mr. Rutherford, Portage-la-Prairie. Letters were read from other members in various parts of the province expressing regret at their inability to be present.

After routine, and the transaction of a great deal of necessary and important business relative to the registration of members, the prosecution of non-qualified practitioners, the inspection of horses entering the province, etc., a vote of thanks was unanimously tendered to the President and Secretary-Treasurer for their efforts on behalf of the Association during the past year.

The election of a new Council was then proceeded with, when the following gentlemen, having obtained the greatest number of ballots, were declared elected:—Messrs. Dunbar, McNaught, Rutherford, Torrance, and Young.

The Association then adjourned to next day, and a meeting of the new councillors was held, at which Mr. Dunbar was chosen President, Mr. Young Vice-President, and Mr. Rutherford Secretary-Treasurer and Registrar. The Board of Examiners was continued in office, and the annual fees for 1891-2 were decided upon.

The Association met in the same rooms at nine on the following morning, all the members mentioned above being present. After routine, Mr. McNaught read a paper on "Castration of the Normal Horse," which was well received by the members, and provoked an interesting and instructive discussion, in which all present took a more or less prominent part.

Mr. TORRANCE followed with an excellent paper on "The Function of the Pneumogastric Nerve in relation to Vomiting in the Horse," the discussion of which was more than ordinarily interesting, many gentlemen relating unusual cases of this much-talked-of occurrence, and all agreeing that Mr. Torrance's views were correct and tenable, while the manner in which they were expressed was highly creditable to him.

Mr. W. L. MORRISON read an account of a very interesting case of

"Eversion of the Uterus, following Abortion in the Mare," which he had successfully treated. The usual animated discussion followed, most of those present giving their views on this accident, and on the treatment advisable under various conditions.

Mr. BAKER laid before the meeting an able description of a case of "Cerebro-Spinal Meningitis," which also met with a full discussion.

Mr. FISHER communicated the history of a case of "Chronic Indigestion due to irregularities of the Teeth," which was well received and formed the nucleus of an interesting debate.

President DUNBAR related the particulars of "A Fracture of the Astragalus," this paper also proving the basis of a full and friendly criticism.

Mr. CHARLES LITTLE, in a practical paper, gave his views on "The Necessity of a better system of Shoeing the Horse," which met with the endorsement of all present.

A vote of thanks was tendered the gentlemen who had contributed papers and communications, and another to the Mayor and Council of the City of Winnipeg for the free use of the large and commodious rooms in which the meetings had been held.

The Association then adjourned, to meet again at the call of the President.

J. G. RUTHERFORD, *Secretary-Treasurer.*

MONTREAL VETERINARY ASSOCIATION.

THE usual fortnightly meeting of this association was held on March 12th, Prof. D. MCEACHRAN in the chair.

Prof. MILLS reported that the "Reference Handbook of Medical Sciences," published by Wood and Co., had been received and placed in the library, consisting of eight volumes. He also reported that experiments on temperature of dogs, horses, and other animals were being made by Drs. Parker, Robertson, McKechnie, himself, and others. Mr. Miller and Mr. Macaulay have been investigating the action of chloroform on horses.

Mr. SIMPSON read a paper on Eversion of the Uterus, and the methods employed in dealing with these cases. He recommended 1½ ounce doses of choral hydrate as a calmative.

A lively discussion followed on the comparative merits of chloral and opium for this purpose, in which Dr. MILLS, C. MCEACHRAN, and BAKER took part. Mr. COMSTOCK referred to two cases of amputation of the uterus on range cattle which had come under his observation in Montana. The CHAIRMAN also referred to serious cases of Eversion in both domestic and range cattle. Dr. MILLS recommended Batley's sedative solution in preference to tinct. opium in these cases. Dr. NELSON WALSH referred to a case of Eversion in a mare.

Mr. CORHAM communicated a case of fissured teat in a cow, a fistula nearly half way up the teat, the result of an injury. He treated it by making a fresh wound, when the cow was not in milk, and stitching it up, resulting in complete closure of the fistulous opening.

Mr. D. MCDONALD presented a case of Laryngitis healed by poultices and saline febrifuge medicines, and Mr. WATSON read a paper on premature labour pains in a cow, which led to a discussion on the action on the fœtus of drugs administered to the mother for the purpose of quieting the animal and lessening the tendency to straining. The CHAIRMAN explained that owing to there being no direct circulation of blood between the mother and fœtus, the latter was thereby protected from the action of such drugs, whereas drugs given the mother were directly communicated to the foal after birth; and recommended this means of giving medicines. He had seen far better results in foals from drugs so administered. Drs. MILLS and JOHNSON followed by some remarks on the subject.

Mr. ST. LOUIS followed by communicating a case of Rheumatic Arthritis in a foal, leading to an animated discussion on the pathology of Rheumatism. Dr. JOHNSON related the *post-mortem* of calves at Munich suffering from this disease.

Mr. MCCRANK read a paper on Azoturia or "Hæmoglobinurea," a disease peculiar to idle horses which receive full complement of food without exercise, resulting in a plethoric condition, and when the animal is exercised the muscles of the quarters swell, he loses power more or less complete; the urine becomes coffee or porter coloured, containing albumen, hæmaglobin, and sometimes blood cells.

Dr. WYAT JOHNSTON presented a specimen sent by Dr. J. M. PARKER, of "Actinomycosis" on the left face and superior maxilla of a cow, with the peculiar rounded yellow spots caused by the actinomyces. He pointed out the difference between this disease and Osteo Sarcoma, it being caused by these vegetable spores. That the parasitic fungus often found its way into the bone by the puncturing of the gum by straw or coarse grass stalks. Being most frequent in animals used for food for people, and being communicable to man as well as to other cattle, it is a matter of importance for sanitarians. He also exhibited specimens of Pleuro-pneumonia, and specimens of the lungs of Canadian animals suspected of Pleuro-pneumonia by inspectors in Great Britain. He explained the differences, which, however, in the hardened specimen are not well marked. Undoubtedly there exist forms of Pneumonia in cattle, resulting in pathological changes stimulating Pleuro-pneumonia so closely as to make it difficult to differentiate between them, and until a micro-organism shall be discovered in Pleuro-pneumonia we must rest our opinion principally on the history leading or not to contact of living healthy cattle. Dr. MCEACHRAN explained that in the fresh section of so-called "Canadian Lung" the alveoli and interlobular spaces were filled by a white waxy exudate, while in Pleuro-pneumonia the exudate in these spaces is invariably fluid, and the general condition of the lung dropsical, and in the former there is usually an absence of the necrotic centres and various pathological evidences of progressive inflammation, seen in contagious Pleuro-pneumonia.

This closed the last active meeting for the session, which has been an unusually successful one for this association.

ROYAL AGRICULTURAL SOCIETY.

AT the monthly meeting on April 8th, Sir John Thorold stated that Professor Brown had presented the following report:—

"*Pleuro-pneumonia.*—During the five weeks ended March 28th, seventeen fresh outbreaks of this disease have occurred in Great Britain, eleven of them in England, in the counties of Bucks, Chester, Lancaster, London, Salop, Warwick, and York (West Riding), and six in Scotland, in the counties of Aberdeen and Edinburgh. In connection with these outbreaks forty-three diseased animals were killed, and 635 healthy cattle, which had been exposed to the risk of infection, were also slaughtered.

"In Ireland seventeen fresh outbreaks of Pleuro-pneumonia occurred in the Dublin district, the majority of them in the South Dublin Union; twenty-seven diseased cattle were killed, and 500 healthy ones, which had been in contact, were also slaughtered.

"*Anthrax.*—There were twenty-eight fresh outbreaks of Anthrax reported in Great Britain during the five weeks, in the counties of Chester, Cumberland, Devon, Essex, Hants, Lancaster, Lincoln (Kesteven), Norfolk, Northampton, Notts, Rutland, Stafford, Suffolk, Wilts, Worcester, York (North Riding), York (West Riding), Ayr, and Wigtown. In these outbreaks fifty-five

animals were attacked, four diseased animals were killed, thirty-seven died, and ten recovered.

"*Swine Fever.*—In Great Britain 424 fresh outbreaks of this disease occurred, 2,119 swine were attacked, 917 diseased pigs were killed, 811 died, 180 recovered, and 371 remained alive when the last return was made up.

"*Rabies*—There were four cases of Rabies reported in England in the five weeks: three of these were in Lancashire and one in Dorset.

"*Foot-rot in Sheep.*—Experiments having reference to the communication of Foot-rot from diseased to healthy sheep were continued during last autumn and winter. Two diseased sheep were placed on grass land at the college, and three healthy sheep from a different part of the country were penned with them for several months, with the result that the diseased sheep recovered and the others remained healthy.

"Further experiments are now being made. Two sheep affected with what is considered to be the typical form of the contagious disease were presented to the college by Mr. Whitehead. Another sheep with well-marked Foot-rot was obtained from the neighbourhood of Harrow. The two diseased sheep from Kent have been penned since the middle of March with a healthy sheep from Harrow, and on April 4th three half-bred tegs from Berkshire from a flock which was free from Foot-rot were added to the pen. The diseased sheep from Harrow is penned in another part of the same meadow with a healthy sheep obtained from the same district. All the animals are under constant observation.'

Courses of lectures on horse-shoeing by Professor Pritchard had been arranged, under the auspices of the Worshipful Company of Farriers, to be held this month at the People's Palace, Regent Street Polytechnic, and the Royal Veterinary College in the course of this month. The Committee recommended that the resignation of Mr. G. Lewis, M.R.C.V.S., of his office of Provincial Veterinary Surgeon for the county of Monmouth be accepted with regret. The committee proposed that out of the sum unexpended of their grant for 1891, £50 be given towards the expenses of the International Congress of Hygiene, which had a section specially devoted to the relations of the diseases of animals to those of man.

CENTRAL CHAMBERS OF AGRICULTURE.

THE monthly meeting of the above Associated Chambers was held at the rooms of the Society of Arts, John Street, Adelphi, W.C., on March 7th, Sir EDWARD BIRKBECK, M.P., in the chair, when Mr. STRATTON read the following report on

"CATTLE DISEASES.

"Your committee desire again to recognise with the utmost satisfaction the vigour with which the Board of Agriculture continues to carry out the duty entrusted to it of dealing with Pleuro-pneumonia. Your committee have constantly maintained that stringent regulations and firm administration are essential for the extirpation of disease, and they are convinced that any temporary inconvenience occasioned by the Pleuro-pneumonia Order, 1891, will be cheerfully borne by stock-owners in consideration of the supreme importance of the end which it is reasonably hoped to secure. The success which has already attended the efforts of the Board of Agriculture in checking Pleuro-pneumonia has led to suggestions that similar measures might be adopted with regard to other diseases of stock. The principle of dealing with contagious disease on the lines of central control and national compensation has for many years past been affirmed by your committee, but they nevertheless are bound carefully to consider its application to any particular malady before advocating its immediate adoption.

"*Pink-Eye.*—Attention has recently been directed, particularly in the North of England—to the prevalence among horses of the disease known as Pink-eye. This appears to be a form of Influenza which has long been known to prevail among horses in this country. The name by which it is now commonly known has been introduced from America, where in 1870-72 it spread over the entire country from Canada south to Ohio, and then eastward to the Atlantic and westward to California. It is stated in a volume just issued by the United States Bureau of Animal Industry to be now 'a permanent disease' in the large cities of America, and it is described as 'a contagious and infectious specific fever.' It does not appear, however, that veterinary authorities in this country would agree in this description. It has been urged that the disease of Pink-eye should be included among the diseases dealt with under the Contagious Diseases (Animals) Acts. Your committee are unable at present to adopt this view. They have not been able to satisfy themselves that this disease is so absolutely and entirely contagious in its character as to justify its being scheduled under the Contagious Diseases (Animals) Acts.

"*Swine Fever.*—The question of applying to Swine Fever the procedure which has been adopted in the case of Cattle Plague, Foot-and-Mouth Disease, and Pleuro-Pneumonia, is one which your committee have had under consideration, but which they have hitherto refrained from bringing under the notice of the Council, in the belief that public opinion with regard to this disease is not at present settled sufficiently to justify the adoption of such a course. Your committee cannot fail to recognise that the different policies adopted by neighbouring counties in dealing with Swine Fever, tend to prevent any reasonable chance of its extirpation, and to throw on a particular county liabilities, for which it is not primarily responsible. But inasmuch as each county has power to prohibit or regulate the movement of swine, within its borders, your committee are not at present prepared to recommend any fresh course of treatment for the control of this disease.—WM. STRATTON, Chairman."

Mr. STRATTON then moved that the above report be adopted, and forthwith sent to the Prime Minister and the President of the Board of Agriculture, and Mr. J. WILSON seconded the motion.

Mr. ST. JOHN ACKERS said that the majority of Chambers sending resolutions were in favour of Pink-eye being scheduled under the Contagious Diseases (Animals) Acts, but that that number was very small. He urged the desirability of scheduling this disease.

Mr. CURREY said that Pink-eye was but a severe form of Influenza, and that the only time when it proved fatal to horses was when the animals were worked whilst suffering from this disease. He, however, did not think it desirable to schedule the disease at present.

The EARL OF WINCHILSEA suggested that a resolution to the following effect should be adopted :—

"That the Board of Agriculture be urged to institute a full and searching inquiry into the disease known as Pink-eye, with the view of ascertaining whether it ought to be scheduled under the Contagious Diseases (Animals) Acts; and what is the proper method of isolation and treatment of animals affected."

Dr. FLEMING, late Chief Veterinary Surgeon of the Army, who had been invited by the Secretary of the Chamber (Mr. Rew) to assist the Chamber in the discussion on Pink-eye, said he had come to the conclusion that the malady was only Influenza. The malady was no new one. It had been known in the country for 400 years. The outbreaks were, however, irregular. Sometimes they assumed a mild form and sometimes a violent form. The Americans were no doubt right when they defined the malady as an "infec-

tious specific fever." It had symptoms peculiarly its own. It was contagious and could be communicated directly from animal to animal. It was also infectious. Persons could convey it from one animal to another. Veterinary surgeons were not agreed as to whether the malady could be spread through the atmosphere, although there was no doubt it was produced by germs. The great feature of the malady was that it followed the track of horses. Some months ago he read a paper on the subject at Carlisle, and in the course of the discussion it came out clearly that isolated places which were seldom visited escaped Influenza. Outbreaks were the consequence of horses coming from without. It would be a serious question to stop the movement of horses—the remedy would probably be worse than the disease. If the disease were scheduled, there were large stables in London, containing hundreds of horses, all of which would be useless if one horse were taken ill. The great mortality was due to the want of observation, horses being worked until they could work no longer, and therefore deaths ensued. He agreed with the committee, that the time had not arrived for taking any stringent measures in dealing with the Influenza.

Mr. JAMES LOWTHER, M.P., had very grave doubts whether Pink-eye was a malady which was capable of being dealt with under the Contagious Diseases Acts unless those Acts were largely modified. Perhaps the better plan would be to modify Lord Winchilsea's suggested resolution by leaving the Board of Agriculture's hand free as to the course of their enquiry.

Mr. TREADWELL thought it desirable to leave out reference to scheduling the disease.

Colonel FITZGERALD agreed with the previous speaker.

Subsequently Lord WINCHILSEA modified his resolution, and it was unanimously adopted in the following form:—

"That the Board of Agriculture be urged to institute a full and searching inquiry into the exact diagnosis and proper treatment of the disease known as Pink-eye."

Mr. FELLOWES, M.P., took exception to the action of the committee in declining to recommend any fresh course of treatment for the control of Swine Fever. Swine Fever was increasing and doing an immense amount of harm; and public opinion was settled to this extent, that there should be uniformity of regulations.

After further discussion the subject dropped.

Parliamentary Intelligence.

House of Commons, April 10th.

TUBERCULOSIS IN CATTLE.

MR. KNOWLES asked the President of the Board of Agriculture whether his attention had been called to the hardship entailed upon butchers, through the seizure, without compensation, of the carcases of animals infected with Tuberculosis, evidence of which it was practically almost impossible to obtain until the animals were slaughtered; when he expected the Royal Commission on Tuberculosis to report; and whether the Government would consider the advisability of extending the provisions of the Contagious Diseases (Animals) Act, 1878, and the amending Act of last Session to Tuberculosis as far as compensation was concerned.

Mr. CHAPLIN: My attention has been called to the subject on more than one occasion. It is quite true that it was first introduced by the hon. member for West Salford by a motion in this House, and upon April 24th, 1890, a deputation on the question was received by the President of the Local

Government Board and myself. A Royal Commission was subsequently appointed by my right hon. friend to investigate the subject. I am unable to say when their labours are likely to be concluded, and, pending the issue of their report, I do not contemplate extending the operation of the Contagious Diseases Acts in the direction desired. I sympathise sincerely with the hardships of the present position, so far as the butchers are concerned, but I may point out that the cases of Pleuro-pneumonia and Tuberculosis differ so greatly that, even if I took the course suggested, I am afraid it would not have the effect which is anticipated, either by the hon. member, or by those whom he represents.

Obituary.

The death is announced of Mr. W. A. Wilson, M.R.C.V.S., Liverpool, who graduated in 1838, and D. Jeffery, M.R.C.V.S., Chichester, who received his diploma in 1849.

France has lost another of her distinguished veterinarians by the death of Professor Lafosse, on March 17th, at the ripe age of seventy-six. Nearly the whole of his professional career was passed at the Toulouse Veterinary School, which he entered as a teacher, becoming Professor, in 1847, of Pathology and Clinical Medicine. In due course he was appointed Director of the School, a position he retained until his retirement some years ago. As a teacher he was greatly esteemed and admired, and as a man of science, who contributed largely to medical literature, he won for himself a high position. His *Traité de Pathologie Vétérinaire* has long been a classic in France, and many of his best writings are also to be found in the *Revue Medicale*, the *Journal d'Agriculture*, and especially in the *Journal des Vétérinaires du Midi*, published at Toulouse. To him is due the discovery—or, rather, re-discovery—of Horse-pox in France. He was a member of many learned societies—among them the Academy of Medicine of Paris—and an officer of the Legion of Honour.

Another French notability in the veterinary world has been removed from the stage. M. Richard, of Cantal, died in February last, in Paris, aged 89 years, after a very eventful career. Studying at Alfort, on graduating he entered the army as veterinary surgeon, but soon left it to study medicine, of which he in time became doctor. But he decided to devote himself entirely to agriculture, and was in 1838 installed as Professor of Animal Economy at the famous Grignon School. Subsequently he was attached to the celebrated *Ecole de haras* at Pin, of which he became director in 1844. In 1845, he founded the *Annales des Haras et d'Agriculture*, and in 1847 published a *Traite du Cheval suivant les lois de la Physiologie et de la Mecanique*. After the revolution of February, 1848, he was elected a member of the Legislative Assembly, where he was a strong champion of agricultural interests, and was much concerned in framing laws with regard to agricultural interests. At the *Coup d'Etat* in 1851 he retired to Auvergne, where he devoted himself entirely to zootechnical and agronomical studies. In 1854, with J. Geoffroy Saint-Hilaire, he founded the Acclimatization Society, of which he was named Vice-president. The last work of his life, and that which is perhaps the greatest, is his *Dictionnaire raisonne d'Agriculture et d'Economie du Betail*, at which he laboured until shortly before his death.

Notes and News.

"THE JOLLY BACILLUS."—It is reported that a coffee-house, with pretty waitresses, has been opened in Berlin, bearing over its portals a sign consisting of Koch's portrait, with the inscription, "The Jolly Bacillus."

INFLUENZA IN NEW SOUTH WALES.—This disease, which we noticed in last month's Journal as so prevalent in Australia, according to the latest accounts, is now abating. At one time the Tramway and Omnibus Company in Sydney had nearly 500 horses suffering from it, and twenty-six died.

CENTENARY OF THE MILAN VETERINARY SCHOOL.—The Italian Minister of Instruction and the Director of this School have decided to fix its centenary *fete* for the middle of June. The programme will be issued shortly.

CONSUMPTION OF THE FLESH OF DISEASED ANIMALS.—At the Berlin abattoir an apparatus has been constructed to cook flesh by steam; consequently, the flesh of cattle and pigs which have been affected with certain diseases is thoroughly cooked, and it and the broth sold in small quantities to poor people. This is found to be an advantageous procedure.

LAMENT OF THE BACILLI.—

For ages we lived, and on mankind we preyed,
With none to molest us or make us afraid;
In decillions we throve, and quintillions were born,
To render our enemy, man, more forlorn;
Though Lilliputs we, yet our forces united
At last have our Brobdignag foemen affrighted,
And with "lymph" they assail us, till now, like poor Lo,
Or Chinese cheap labour, we're fated to "go."
So, trim little headstones we last week bespoke,
And we yield up our spirits to Pasteur and Koch!—*Life.*

DEATH OF A VETERINARY SURGEON FROM GLANDERS.—News received from Parndorf, near Pressburg, states (says Reuter's Vienna correspondent) that all the horses in two stables there had to be killed on account of an outbreak of Glanders among them. The veterinary surgeon and the two farmers to whom the animals belonged were wounded in carrying out this necessary measure, blood-poisoning ensuing in all three cases. The veterinary surgeon died, and no hope was entertained of the recovery of the two farmers.

REAPPEARANCE OF RABIES IN LONDON.—The withdrawal of the dog-muzzling order has had its expected result (the *World* says) in the reappearance of Rabies in the metropolitan district. Two patients recently bitten by an undoubtedly mad dog at Croydon were sent for treatment to the Pasteur Institute at Paris last week with the assistance of the Mansion House Fund. Throughout last year, while the muzzling of dogs was compulsory, not a single patient had to be sent over by the committee.

THE BROWN INSTITUTION.—Dr. C. S. Sherrington, lecturer on Physiology at St. Thomas's Hospital, has been appointed Superintendent of the Brown Institution, *vice* Mr. Victor Horsley, F.R.S., who has resigned.

HORSE-BREEDING IN FRANCE.—The breeding of horses is prospering in France. According to M. Develle, the Minister of Agriculture, in 1882 the French imported 20,400 horses, and only exported 13,180. Since then there has been a falling off in the importation, and a rise in the exportation, so that in 1890 the latter amounted to 22,000 head, and the former to 10,000 head. The exported horses belong to the breeds known as Boulonnaise and Percheronne. The latter come from the plains of Chartres, and are much employed as omnibus horses in Paris. They are a specific type of horse peculiar to France, and designated *Sequanaise* by the zoologist, André Sanson. Their chief characteristic feature is a long, flat, dolichocephalic head; they are often dappled grey in colour, and, besides being docile and intelligent, they are both powerful and fleet. The demand from abroad for

this breed is said to be threatening the purity of the type, and a stud book has been instituted, by which the pedigrees may be preserved and the race kept up to the mark.

THE SALE OF DR. KOCH'S LYMPH.—According to the Berlin *Politische Nachrichten*, Dr. von Gossler, Minister of Public Worship, has issued an order containing instructions as to the regulations to be observed in connection with the sale of the Koch remedy for Tuberculosis by apothecaries. This order requires all apothecaries engaged in the sale of lymph to return to Dr. Liebertz at Berlin whatever quantities of the fluid still remain unsold within six months of the time of purchase, when a fresh supply will be given in exchange without further cost. The price of the remedy has been fixed at 6s. per cubic centimetre, or five cubic centimetres for £1.

Correspondence.

WRONG DESIGNATION.

DEAR SIR,—Through the columns of your next journal, will you kindly answer the following question: Can a Veterinary Surgeon who takes his diploma from Edinburgh put M.R.C.V.S.L. to his name?—UTTOXETER.

[We have repeatedly stated that the letter L appended to the other initials is unnecessary and misleading, as there is only one Royal College of Veterinary Surgeons for the three kingdoms, and it does not belong to either London or Edinburgh, but grants licenses to veterinary students in London, Edinburgh, and Glasgow. Therefore the initials should only be M.R.C.V.S. for all its graduates.—ED. *V. J.*]

Communications, Books, Journals, etc., Received.

COMMUNICATIONS have been received from R. W. Burke, A.V.D., Amballa; U. B. McCurdy, Hutchinson, Kansas, U.S.A.; W. Awde, Stockton-on-Tees; E. Millais, London; E. F. de Jong, Edinburgh; Professor McEachran, Montreal; P. Moir, Edinburgh; F. Raymond, Woolwich; R. S. Barcham, Paston; E. W. Hoare, Cork; Prof. Lüpke, Wurtemberg; A. W. Hill, London; R. Gibbs, Taunton; J. Armstrong, Penrith; J. A. Nunn, A.V.D., Lahore; W. Penhale, Barnstaple; J. G. Rutherford, Manitoba; Dr. Duncan, Ontario; D. M. McNaught, Rapid City, Manitoba; F. Torrance, Brandon, Winnipeg; "Uttoxeter"; J. W. H. Ashe, Cork; W. S. Adams, A.V.D., Madras.

BOOKS AND PAMPHLETS: Johns Hopkins Hospital Reports; Bulletin des Seances de la Société Nationale d'Agriculture de France; Bulletin et Memoires de la Societe Centrale de Medicine Veterinaire de France; *M. V. Galtier*, Traité des Maladies Contagieuses et de la Police Sanitaire des Animaux Domestiques; *E. Hess*, Ueber Hufkrankheiten und ihre Behandlung.

JOURNALS, ETC.: *Medical Age; Echo Veterinaire; Thierarzt; Journal of United Service Institution; Moderno Zooiatro; Bulletin of the Johns Hopkins Hospital; Fortnightly Review; Journal of Comparative Medicine and Veterinary Archives; Repertorium der Thierheilkunde; Mark Lane Express; Lancet; Revue Veterinaire; Recueil de Méd. Veterinaire; Annales de Med. Veterinaire; Ciinica Veterinaria; Edinburgh Medical Journal; Repertoire de Police Sanitaire Veterinaire; Wochenschrift fur Thierheilkunde und Viehzucht; Hufschmied; Practitioner; Archiv fur Wissenschaftliche und Praktische Thierheilkunde; British Medical Journal; Journal de Med. Veterinaire et de Zootechnie; Journal of the Royal Agricultural Society.*

NEWSPAPERS: *Montreal Gazette; Petit Journal; Bombay Gazette; Yorkshire Herald.*